Shire Archaeology

Prehistoric Stone Circles

Aubrey Burl

AUBREY BURL

PREHISTORIC STONE CIRCLES

Third edition

SHIRE ARCHAEOLOGY

Cover illustration
Swinside Stone Circle, Cumbria.

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I wish to thank Mick Sharp for his photographs (plates 3, 4, 10, 13, 15, 21), taken especially for this book.

Note on dates

The radio-carbon method of obtaining 'dates' from ancient organic material is misleading. Its results are too young and need to be extended backwards. To avoid a confusing conflict between them and the astronomically computed dates proposed for stone circles like Callanish the radio-carbon dates in this book have been corrected. Such adjusted dates are followed by BC. Where a carbon-14 assay is quoted by itself it is followed by bc.

The calibration table by R. M. Clark used to make these corrections can be found in *Antiquity* 49, 1975, 264-5.

Preface to third edition

Since this book was first written in 1979 there has been much further research into the problems of stone circles. For this reason much of the text has been rewritten to include new material and to update the bibliography. There is also a gazetteer of sites to visit.

I would like to take this opportunity to thank colleagues for their generous sharing of information: first those whose regional studies have been of such value, Isobel Churcher for her researches amongst the Wicklow stone circles, Rosemary McConkey in Ulster, Jane Murray in Wigtownshire, and John Waterhouse in Cumbria; secondly, to Dr Clive Ruggles for his archaeo-astronomical researches; and thirdly, perhaps most of all, to Dr Sean O'Nuallain, whose fieldwork and surveys in south-west Ireland have set exemplary standards for all who engage in the study of prehistoric stone circles.

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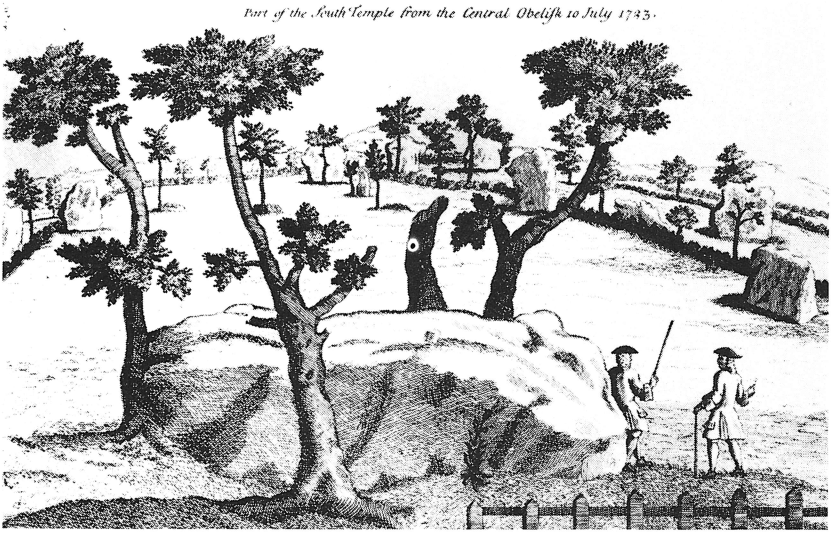

Part of the ſouth Temple from the Central Obeliſk 10 July 1723.

Plate 1. William Stukeley and a friend examining the ruins of Avebury in Wiltshire. The fallen centre stone of a circle lies beside them. Were it not for the fieldwork of antiquarians like Stukeley and John Aubrey our knowledge of stone circles would be considerably less as so many of them were destroyed in the nineteenth century.

1

Introduction

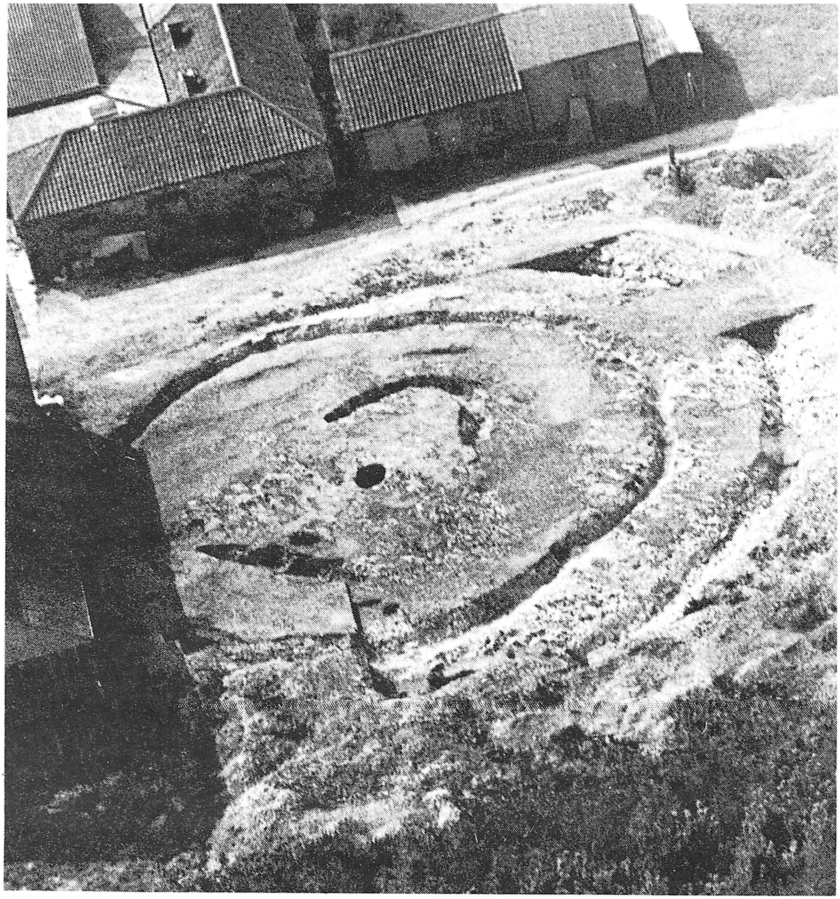
Whether in northern Scotland standing in the moorland hollow where the stones of Guidebest curve alongside the Latheronwheel river or looking at the desolate ring of Tregeseal six hundred miles to the south amongst the tors of Land's End one senses an empty stillness about these ancient, ruined circles. It is the realisation of our ignorance about the people who raised the stones. 'There are no remembrances of the founders, any other than an uninterrupted tradition of their being sacred,' wrote William Stukeley, one of the first chroniclers of these rings (plate 1). Over two centuries later his words are still true. What knowledge we have about the circles comes chiefly from the work of archaeologists with assistance from geologists, astronomers and statisticians, some of whom have unfortunately over-emphasised the significance of Stonehenge, which is only one of nearly a thousand stone circles and the most uncharacteristic of all of them. Once again Stukeley had a better perspective:

> 'Tho' Stonehenge be the proudest singularity of this sort ... yet there are so many others, manifestly form'd upon the same, or kindred design, by the same measure, and for the same purpose, all over the *Britanic* isles, that we can have no room to doubt of their being made by the same people, and that by direction of the *British* Druids'.

Druids excepted, it has taken a long time to add much to his observations about the stone circles of the British Isles. These are among the most fascinating and enigmatic of our prehistoric monuments, yet very little was known about them until recently. Now we do have a good idea of when they were put up, in which parts of the country, how they were erected, what their origins were, and what is likely to be found in them. What they were used for is, however, a different question. The answer will probably always be elusive and for the present we must be content with guesses based on the architecture and contents of these weathered sites, whose survival for thousands of years is itself a matter of marvel.

In the past few years so much has been written about the theoretical measurements, geometry and astronomy of megalithic rings that the persistent association of these circles with death has been largely overlooked. Yet whereas the possibility of a ring being an observatory is a matter of conjecture the presence of human cremations is not. Why people's bones were carefully buried within so many rings is one of the questions that we should be seeking to answer.

Plate 2. Callis Wold round barrow, Humberside. With the removal of the covering mound the deep circular outer ditch can be seen without difficulty. The U-shaped and straight slots at the centre of the monument are the remains of a timber mortuary house where the bodies of the dead were laid.



2

The origins of stone circles

Where or why the first stone circle was built is unknown. At one time, because of the scraps of pottery discovered in rather unrepresentative circles like Avebury and Stonehenge, it was believed that all the megalithic rings had been constructed by Beaker people during the bronze age, but the evidence was incomplete. Many of the largest and most imposing circles were the work of native farming communities of the third millennium BC at a time in the neolithic or new stone age long before Beaker people entered the British Isles.

Stone circles were enclosures and their inspiration may have come from the large round mounds covering bodies that already stood in the eastern parts of Britain. Some of them concealed huge circular ditches or rings of stones or posts surrounding a mortuary house where the dead were laid. Before they were finally covered with a round barrow or a cairn these sacred rings resembled both the later henges with their earthen banks and the stone circles, and if they were shrines, in the modern sense of the word, rather than tombs, then in their open-air state they could provide an origin for the spacious ceremonial circles of the late neolithic and early bronze age.

At Pitnacree in Perthshire, one of the earliest of these mounds, people put up a horseshoe-shaped heap of cobbles inside a wide oval of kerb-stones. It was only after four deposits of burnt human bone were placed inside the horseshoe that the whole complex was buried under a massive round barrow. It is interesting that at Pitnacree, dated by carbon-14 to 2860 ± 90 bc (*c.* 3650 BC), the builders anticipated modern theories about the geometrical design of megalithic rings by setting out their 'oval' wall in a series of straightish lengths, a constructional method that endured well into the bronze age.

Further south on the Yorkshire Wolds other large neolithic round barrows were put up, three in a 6 mile (9.7 km) long line along a low valley: Duggleby Howe, Wold Newton and Willy Howe. Not far to the west there was another at Callis Wold (plate 2). Here the neolithic families placed their wooden mortuary house inside a great ditched circle 120 feet across (37 metres), a monument very similar to a henge with a round barrow at its centre. Eventually a mound almost exactly the same size as Pitnacree was heaped over the timber building. In the same way, at Whiteleaf at the edge of the Chilterns, another group dug a circular ditch to demarcate a 'sacred' area where they built a hut to shelter the disinterred skeleton of an old man. It was only after elaborate ceremonies that a round barrow was raised over the site.

The most likely explanation for these bizarre collections of bones, some of them lacking skulls and far too few to represent even a minute fraction of the population, is that they were the remains of an ancestor cult in which the living ritually used skulls and longbones, believing that the ghosts of the dead would protect them just as a dedicatory burial would add potency to a ceremonial monument. In the new stone age death and the dead obsessed the living. But, needing to control these powerful and dangerous spirits, the people confined the bones inside 'magic' rings of earth or stone.

With the growth of population in the late neolithic larger, open enclosures were needed for the communal ceremonies and it may have been from about 3500 BC that the first great megalithic rings and henges were erected. The earliest carbon-14 assay from a stone circle comes from the Lochmaben Stone near Gretna Green, dated to 2525±85 bc (*c.* 3278 BC), contemporary with some of the first henges built in lowland Britain: Llandegai by the Menai Straits around 3250 BC; Arminghall in Norfolk whose inner ring was dated to 2490±150 bc (*c.* 3230 BC); and Barford in the woodlands of Warwickshire, put up around 3110 BC. These free-standing earthworks, 100 feet (30 metres) or more in diameter, may well have been derived from the previous round neolithic funerary enclosures with their outmoded mounds. And stone circles were probably the counterparts of henges in those highland areas where it was hard to dig (plate 3) but where building stone was plentiful.

Maybe as many as a thousand of these rings still exist, some of them almost unrecognisably damaged. A catalogue compiled in 1976 listed 963 known sites. Since then other sites have been added and in 1978 on the island of Arran a peat-covered, unknown stone circle was found on Machrie Moor (plate 4). A thousand is a conservative figure but this is only a proportion of the original number. The rings were put up over some two thousand years within an area stretching 800 miles (1300 km) from the Shetlands down to Cornwall and 400 miles (650 km) from Aberdeenshire across to western Ireland. Over so many centuries and inside 300,000 square miles (78 million hectares) no uniform pattern of architecture or custom could be expected and it is likely that the practices inside the first rings were very different from those in the last.

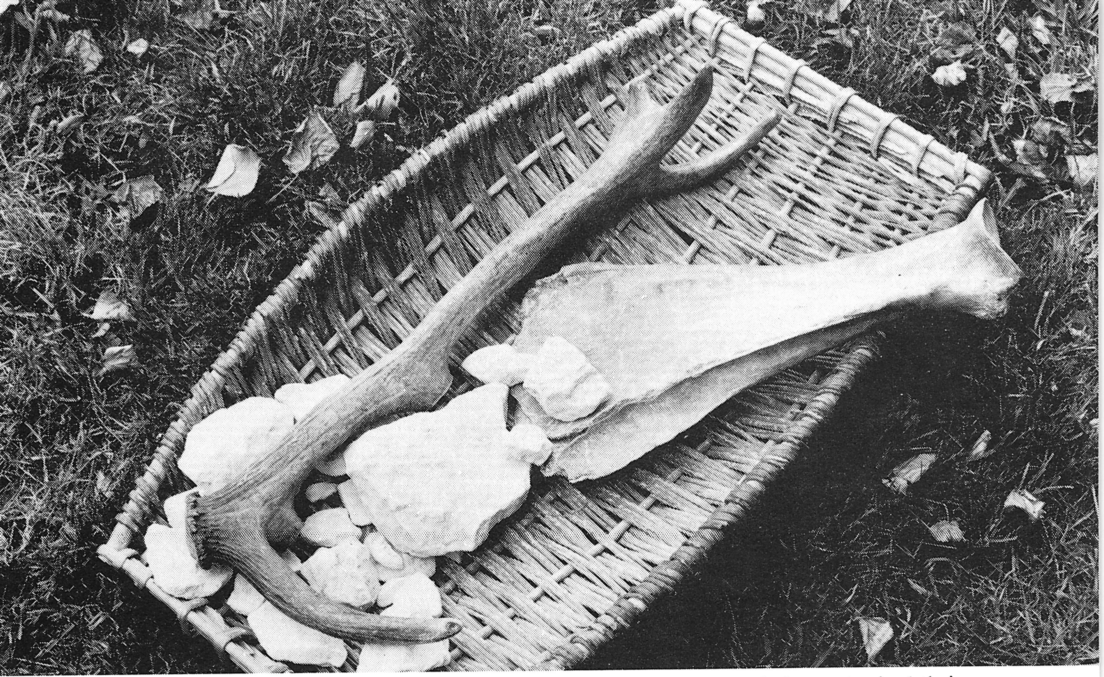
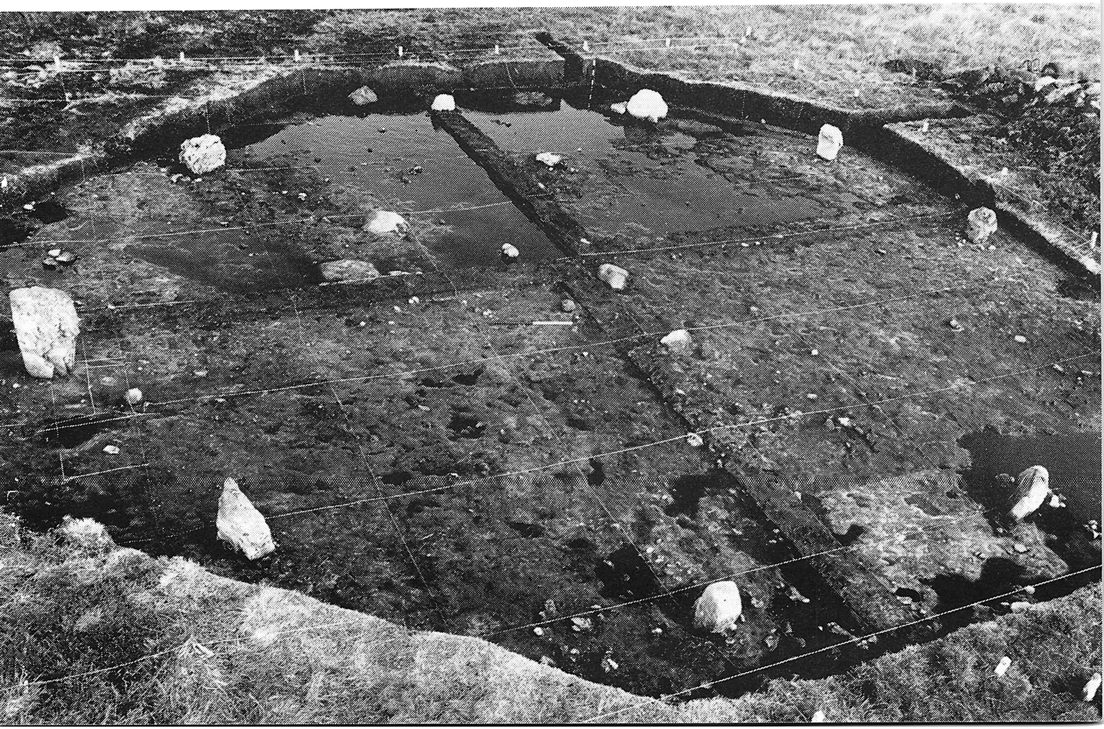


Plate 3. It was with tools such as these that neolithic people dug their ditches and raised their colossal banks. The antler pick was used to break up the soil and then the ox shoulderblade was held to scrape the earth and chalk into the wickerwork basket. (Photo: Mick Sharp)

Plate 4. The discovery of a 'new' stone circle on Machrie Moor. Before the author's excavation in 1978 only the very top of the stone on the extreme left showed above the peaty grass. The ring is 43 feet (13.2 metres) in diameter. Subsequent excavations proved the existence of an earlier timber ring. (Photo: Mick Sharp)



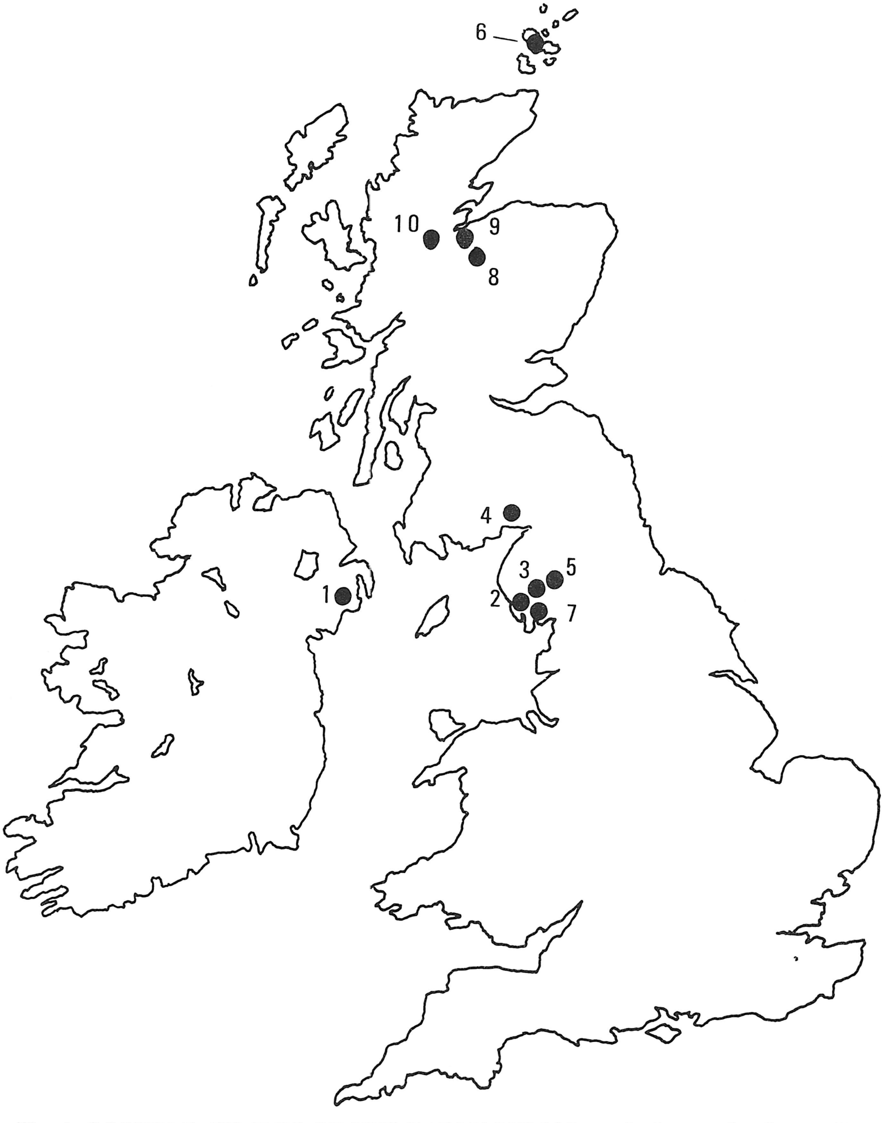


Fig. 1. POSSIBLE CIRCLES OF THE EARLY PERIOD. 1. Ballynoe, Co. Down (J 481404). 2. Brats Hill, Cumbria (NY 173023). 3. Castlerigg, Cumbria (NY 292236). 4. Lochmaben Stone, Dumfries (NY 312659). 5. Long Meg and Her Daughters, Cumbria (NY 571373). 6. Stones of Stenness, Orkney (HY 306125). 7. Swinside, Cumbria (SD 172883). *Clava Cairns, Inverness-shire.* 8. Aviemore (NH 896134). 9. Balnuaran of Clava (NH 756443). 10. Corrimony (NH 383303).

3

Early stone circles (*c.* 3370 to 2670 BC)

Middle to late neolithic

If the supposition is correct that the earliest stone circles were related to henges, themselves descended from neolithic round burial monuments, then it could be expected that these first megalithic rings would reflect this in their shape, size and contents of human bone. Concentrating around the coasts of the Irish Sea and the sea-routes of the Atlantic from Ireland to Scotland, the circles were few but impressive. They were large, usually over 100 feet (30.5 metres) in diameter, and were true circles although some had a flattened arc, perhaps because of the custom of several work-gangs putting up separate sections of the circumference.

Few finds have come from these rings — occasional bits of neolithic pottery, some stone axes — and the only radio-carbon dates yet available are from the Lochmaben Stone and from the Stones of Stenness in the Orkneys where two determinations averaged 2297 bc (*c.* 2965 BC). Yet the situation of the rings, particularly in the Lake District, suggests they were the creations of people engaged in the manufacture of stone axes during the middle and late neolithic period, just as some Yorkshire henges are believed to have been the depots from which axes were redistributed to Wessex and other regions of dense population.

Many of the rings like Castlerigg and Swinside (front cover) in Cumbria and Ballynoe in Co. Down have closely set stones, very similar to the continuous banks of henges and like them broken by a conspicuous entrance, which in the case of the circles was defined by two pairs of stones or taller pillars (plate 5). All of them were built of local stone dragged to the site by men and women. It is possible that oxen, castrated bulls, were trained to move the stones from their source but there is no evidence for this. Many other primitive societies that erected megaliths — on Easter Island, on Malekula in the New Hebrides, even in Egypt during the construction of the pyramids — chose to lash each stone to a sledge and haul it themselves rather than risk injury to valued and awkward oxen.

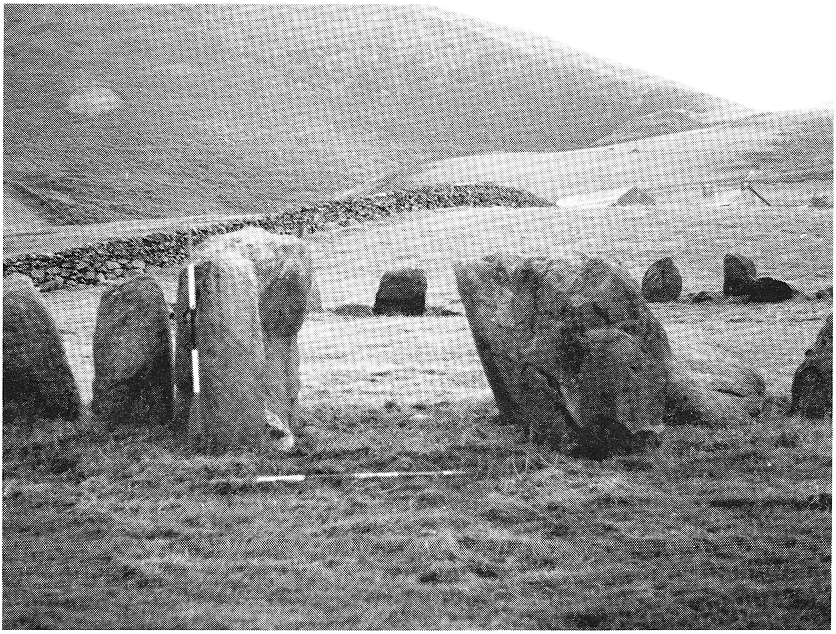
Outside most of the early circles stood isolated monoliths. Some of these outliers may have been erected in line with celestial events such as midsummer sunrise or midwinter sunset, as seems to be the case with the decorated outlier at Long Meg and Her Daughters near Penrith, but many of the outlying stones, like those at Ballynoe, are too low for observations of the sky. Others, like the plough-scratched stone at Castlerigg near Keswick, have been moved from their original positions and are not reliable guides to their intended function.

It is probable that prehistoric societies, much concerned with death and fertility, incorporated sightlines to the sun or moon in the design of their ritual monuments by raising such gnomonic pillars. Symbolism rather than science, however, seems to have been the motive for such orientations. These early stone circles were too crudely built to be refined observatories and their contents of human bone indicate the dedicatory, maybe even sacrificial nature of the rites that went on in them.

Their open interiors, their low-lying positions, often in valleys and near rivers or lakes, and their great size all point to their being meant for large groups of people meeting for communal ceremonies. What these were is impossible to know, especially as so few objects have been recovered from them. Yet quite consistently traces of fire and of human bone have been found, not complete skeletons but cremated pockets of bone as though such relics were vital dedications when the stones were erected. A widespread form of ancestral cult may be suspected. At Stenness the remains of a wooden mortuary building lay inside the ring, connected by rough paving to a central 'hearth' in which there were flecks of seaweed, broken pottery and burnt human bones. Charcoal was discovered at Castlerigg and also at Swinside accompanied by a 'minute fragment of human bone'. Several patches of cremation and charcoal were buried by the low cairn inside Ballynoe. At Long Meg, one of the biggest rings in the British Isles, two cairns once stood near the centre, 'nine or ten foot high' (2.7 to 3 metres) according to John Aubrey, the seventeenth-century antiquarian and author of *Brief Lives,* who intended to ask the parish priest 'about the Giants bone and Body found there'. Today both the cairns and the 'body' have gone and Long Meg retains her secrets.

One exceptional group of rings which is unlike the others but which must originate in this period is that of the Clava cairns in Scotland. These Inverness circles surround passage-graves and ring-cairns and have stones lowest at the north-east, rising in height to the south-west where the chambered tombs have their entrances. Even here the 'tombs' are less funerary monuments than shrines, for none of them contains more than two bodies and several have none at all. The general association with the setting moon, scatters of white quartz pebbles that so often have been placed with the dead as talismans and the carving of cupmarks on stones show that these encircled cairns, whose entrances were aligned upon the moon, were built by people to whom the moon and death were intimately connected.

Plate 5. Swinside, Cumbria. To define the entrance to this impressive ring (front cover) the builders left a wide gap on the circumference and erected an extra pair of portal stones outside it.



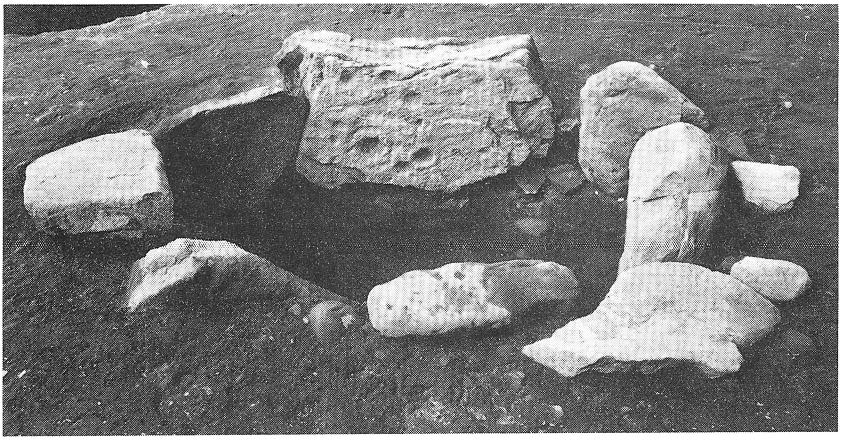


Plate 6. A stone-lined grave inside the Balbirnie stone circle, Fife. The excavations of 1970-1 showed that this cist had been disturbed and contained only a few flecks of cremated bone and charcoal. The backstone with its cupmarks and cup-and-ring marks demonstrates the association of such decoration with death and burial.

Plate 8. The two gigantic stones at the south entrance of Avebury in Wiltshire. Over 16 feet (5 metres) high, they each weigh about 60 tons and must have demanded incredible efforts to erect them.

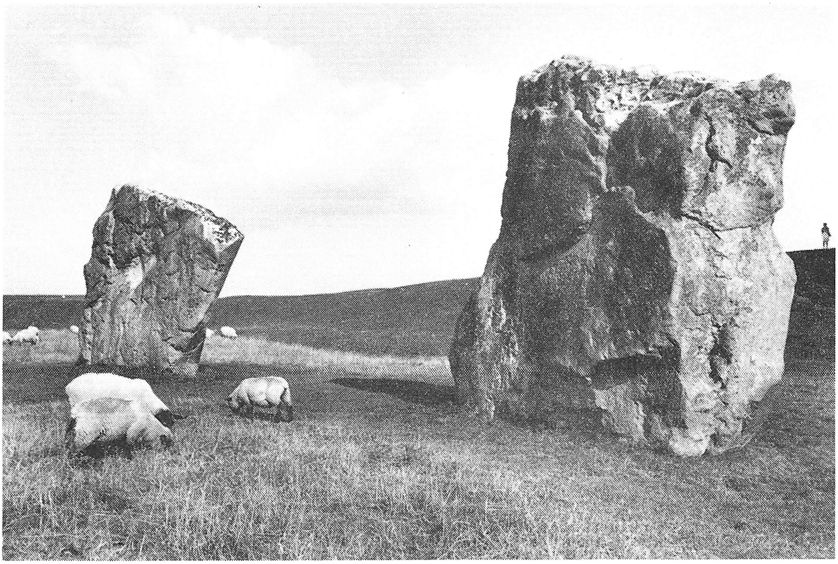
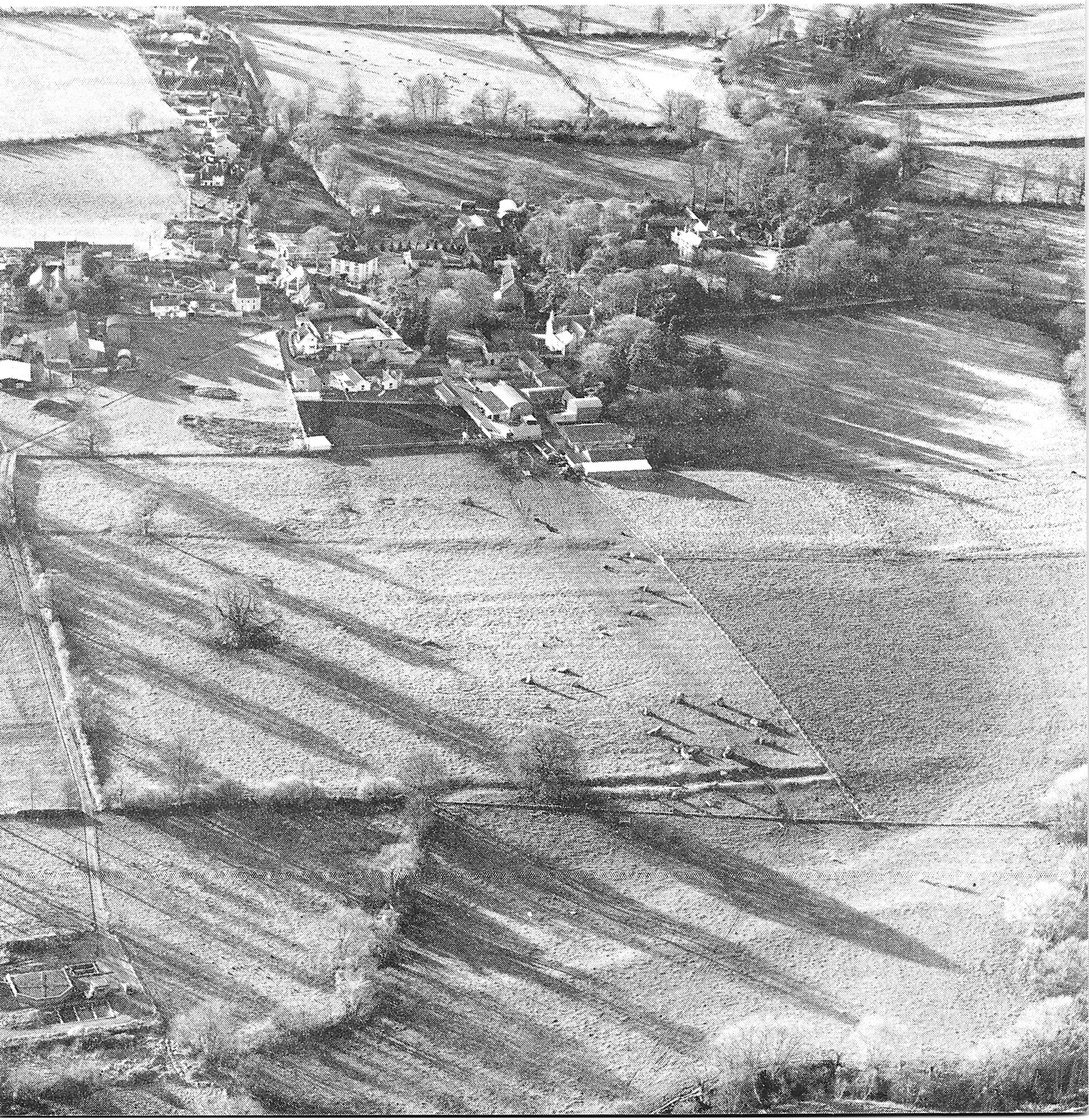


Plate 7. The remains of the stone circles and their avenues at Stanton Drew, Avon. The Great Circle and the smaller one to its north-east are in the field at the centre of the picture. Some stones of their avenues can still be seen. The more remote south-west ring is two fields away, left centre. The three stones of the Cove (plate 18) are hidden by the church. (Photo: West Air Photography)



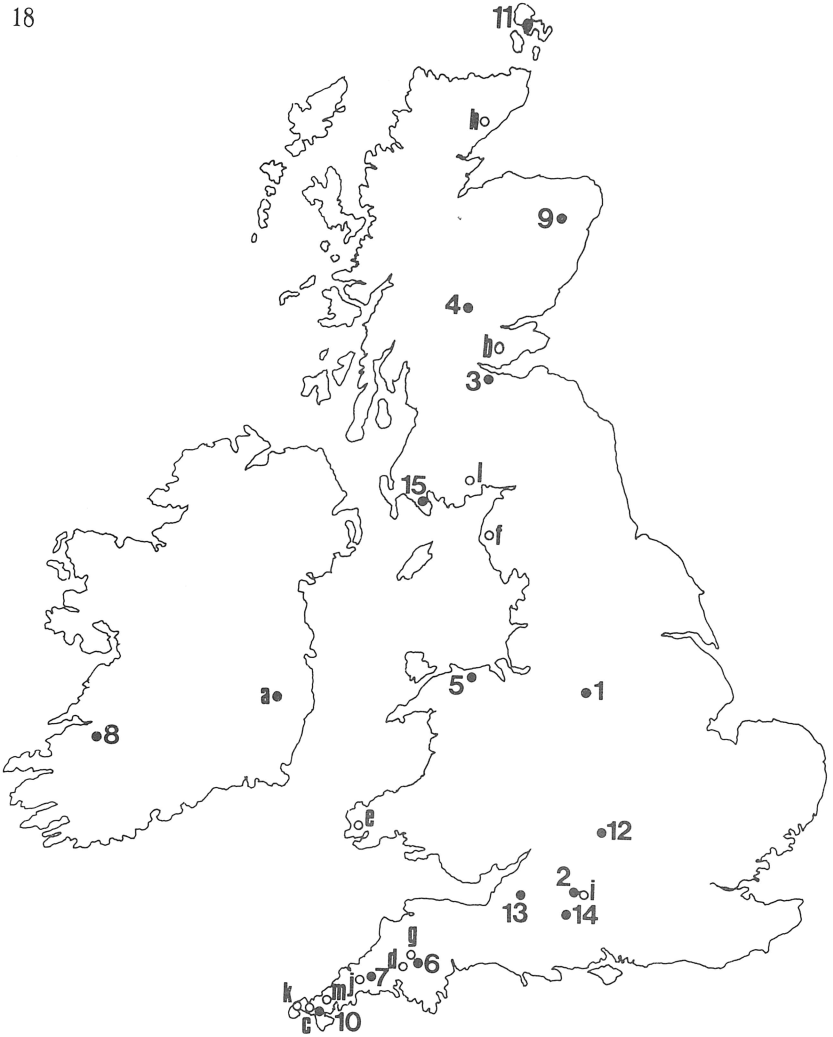


Fig. 2. POSSIBLE CIRCLES OF THE MIDDLE PERIOD. Solid rings stand for sites worth visiting. Open rings represent other circles mentioned in the text. 1 Arbor Low, Derbyshire (SK 160636). 2 Avebury, Wiltshire (SU 103700). 3 Cairnpapple, West Lothian (NS 987717). 4 Croft Moraig, Perthshire (NN 797472). 5 Druids Circle, Gwynedd (SH 722746). 6 Fernworthy, Devon (SX 655841). 7 Hurlers, Cornwall (SX 258714). 8 The Lios, Co. Limerick (R 640410). 9 Loanhead of Daviot, Aberdeen (NJ 747288). 10 Merry Maidens, Cornwall (SW 432245). 11 Ring of Brodgar, Orkney (HY 294132). 12 Rollright Stones, Oxfordshire (SP 296308). 13 Stanton Drew, Avon (ST 603630). 14 Stonehenge, Wiltshire (SU 123422). 15 Torhousekie, Wigtownshire (NX 383565). a Athgreany, Co. Wicklow. b Balfarg, Fife. c Boscawen-Un, Cornwall. d Brisworthy, Devon. e Gors Fawr, Dyfed. f Grey Croft, Cumbria. g Grey Wethers, Devon. h Guidebest, Caithness, i Sanctuary, Wiltshire. j Stripple Stones, Cornwall. k Tregeseal, Cornwall. l Twelve Apostles, Dumfries-shire. m Wendron, Cornwall.

4

The middle period (*c.* 2670 to 1975 BC)

Late neolithic to early bronze age

The time when metallurgy began in the British Isles and when Beaker people were increasingly mixing with native people was also the time when many of the most perfect rings were built. The practice of putting up circular enclosures was taken up in outlying regions until in almost every region where there was farming land and outcrops of rock there were stone circles.

Some of these new rings were enormous. Giant circles like the Twelve Apostles in south-west Scotland and Stanton Drew in Avon (plate 7) were over 250 feet (76 metres) across, the first rings in their areas and clearly meant as foci for large populations. The vast Outer Circle at Avebury with its hundred massive stones (plate 8) was nearly a quarter of a mile (400 metres) wide. Even the Ring of Brodgar in the Orkneys was 340 feet (104 metres) in diameter and may have been built at the extreme edge of a territory facing the Stones of Stenness across a narrow isthmus between two lochs. The majority of the circles, however, were much smaller, between 60 and 100 feet (18-30 metres) in size.

These rings are in some ways even more interesting than their predecessors. Their designers seem to have attempted to construct elegant shapes. Now there were not only circles and flattened circles but also true ovals, perhaps scribed by the use of a loop of rope held tightly against three pegs set in the ground. There was a tendency towards a preferred number in stones in each region irrespective of the size of the rings. Many twelve-stone circles were put up around the Lake District, and in north-east Scotland there were many ten-stone rings even though their diameters varied between 57 feet (17 metres) and 86 feet (26 metres), showing that the number of stones was not determined by the length of the circumference. From such evidence we have a hint of elementary numeracy amongst these early British societies with their simple counting systems.

Already regional architectural forms were developing. Even in England and Wales, where many rings seem superficially similar, there were differences. Grey Croft in Cumbria did have a cairn and an insignificant outlying stone aligned nowadays on the nearby Seascale nuclear power station. The famous Rollright Stones in Oxfordshire (plate 9) had a much

Plate 9. The northern arc of the Rollright Stones, Oxfordshire. Its weathered limestone pillars have been described as 'corroded like worm-eaten wood, by the harsh jaws of Time'. The outlying King Stone is off the picture on the other side of the road. (Photo: Crown Copyright National Monuments Record)

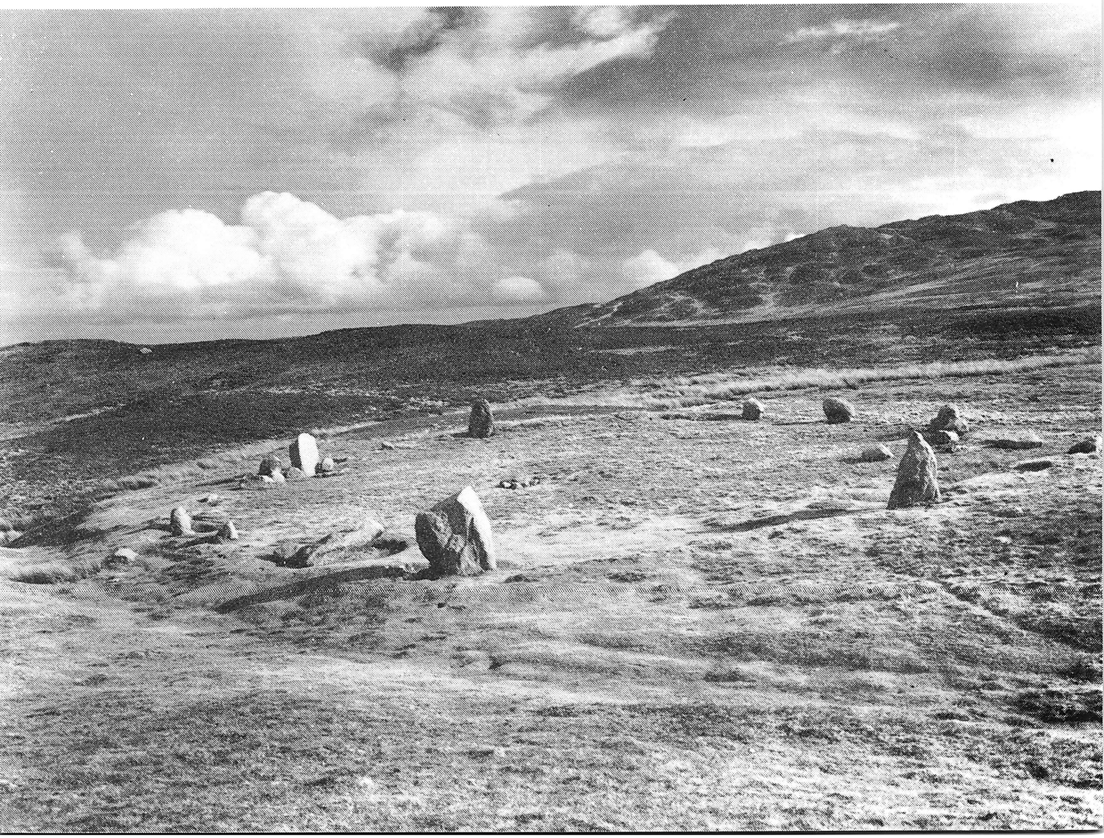
more spectacular outlying stone to its north-north-east. This King Stone emphasises how misleading astronomical 'sightlines' can be. Its apparent alignment from the centre of the circle towards the rising of the bright star Capella around 1750 BC is an illusion. Excavations from 1982 onwards have shown that it was probably erected far earlier than the Rollright Stones. Instead, it seemed to be associated with a small neolithic cairn from which it had no astronomical significance.

Of quite different construction was the Druids Circle on the Welsh headland of Penmaenmawr, its stones set in a rubbly bank with a stone-lined entrance (plate 10). Bones of children, maybe sacrifices, were buried at the centre of the ring. In south Wales the pillars of Gors Fawr were graded in height like those of Fernworthy and Brisworthy on the outskirts of Dartmoor. The few rings there were built around the drier, protected edges of the moor, not on the less attractive uplands of forest and blanket bog.

Here and elsewhere in the south-west peninsula there were paired and treble rings: the Grey Wethers in Devon (plate 11); the Hurlers (plate 12), Wendron and Tregeseal in Cornwall. The multiple rings of Stanton Drew and Avebury may have stemmed from the same tradition. Other stone circles in Cornwall had centre stones like that at Boscawen-Un (plate 13). Avenues of stones led up to some rings along the Welsh Marches and in the southern foothills of Cumbria (plate 14). An occasional concentric circle, maybe an imitation of a wooden hut, was erected in Wessex (plate 15).

Around the Wicklow Mountains of Ireland simple and attractive circles were raised, and far away to the west in Co. Limerick heavy stones lined

Plate 10. The Druids Circle, Penmaenmawr, Gwynedd. This ring, whose stones stand in a low, worn-down bank, was built alongside a prehistoric trackway and was a dominant feature of the landscape. From little cists at its centre came the cremated bones of children. (Photo: Mick Sharp)



the interior of the Lios henge by Lough Gur. Freestanding stone circles were put up inside henges along the central spine of Britain: at Balfarg, Fife; at Cairnpapple in West Lothian; at Arbor Low in the Peak District; right down to the Stripple Stones in Cornwall. And it was during this period that the bank and ditch were added to Avebury. To the east of this spine of hills where such circle-henges are to be seen were henges, to the west were stone circles. Every inhabited district apparently had some form of circular enclosure.

The most informative of all rings are the recumbent stone circles of north-east Scotland (plates 16, 17). Densely concentrated in individual territories of 4 to 6 square miles (1000 to 1500 ha) alongside patches of well drained, fertile soil, they possess unique features. Put up on selected hillside terraces between the Grampian mountains and the sea, these splendid family rings commanded long views to the south-west. The idea of the huge recumbent block, a version of the carved stones at the entrances of Irish Boyne passage-graves such as Knowth, was probably brought into Aberdeenshire by axe-traders and early bronzesmiths who mingled with descendants of the Clava stone circle tradition. These natives manoeuvred the heavy recumbent into line with the southern moonset and tilted it from side to side until its upper surface was horizontal. Around it quartz, white as the moon, was scattered. Sometimes cupmarks, like images of the moon, were carved on the stone. Then, after it and its flankers were in position, the carefully counted ten or eleven stones were erected in a perfect circle. Dedications of human cremations were buried inside a central ring-cairn. At Loanhead of Daviot skull fragments of children were found there.

Whereas at this time in southern Britain there were only infrequent burial associations, in the north and west of the British Isles it was usual to have a cairn, a barrow or a cist inside the ring. Death and stone circles were closely linked there. The origins of the recumbent stone, cupmarks, the interest in lunar alignments and the deposits of cremated bone reveal that whatever occurred in these rings was probably derived from neolithic burial rites. In the same way it is possible that in the south the three-sided settings of stones known as Coves were symbolic representations of megalithic tomb entrances. Versions of these Coves can be seen at Avebury, at Stanton Drew by the church (plate 18), and, collapsed, inside Arbor Low. Even into the bronze age human bones may have been brought to them in the expectation that ancestral spirits could be conjured to the assistance of the living.

Plate 11. The Grey Wethers, Dartmoor. A pair of large rings put up alongside each other. Such multiple circles are characteristic of western Britain and the south-west peninsula.

Plate 12. The Hurlers, Bodmin Moor, Cornwall, seen from the north. The stones of the central circle of this multiple site can be seen in the middle of the photograph. The third ring to the south has been almost entirely destroyed.

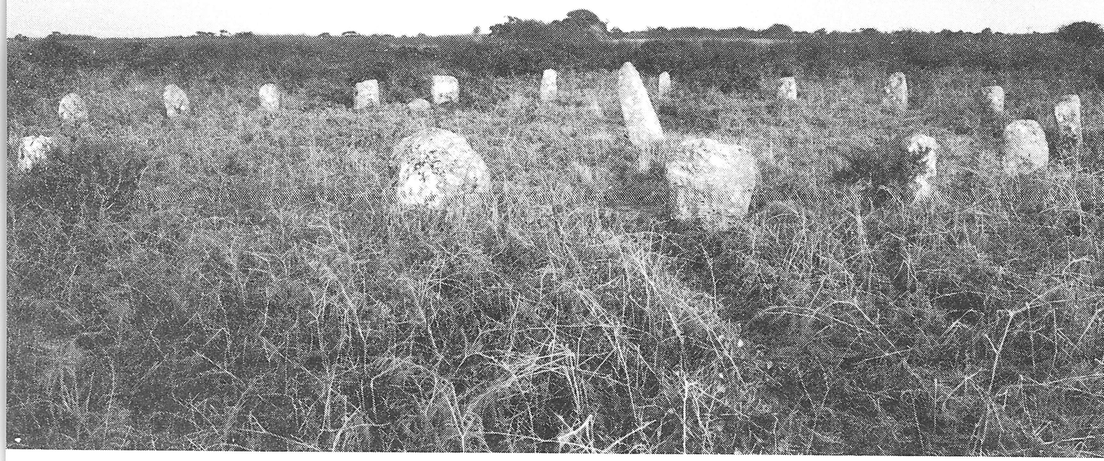


Plate 13. Boscawen-Un, Cornwall. The rounded block in the foreground is made of quartz unlike the other stones, which are of local granite. The eighteenth-century antiquarian William Stukeley was so impressed with this ring that he believed it must have been the first monument built by the leader of a band of Druids who had come to Britain to preach an early form of Christianity. (Photo: Mick Sharp)

Opposite page:

Plate 14. A reconstruction of Avebury by William Stukeley in 1743. He believed that the stones had been landscaped in imitation of a holy snake, the embodiment of the Holy Trinity, with a sacred egg in its middle. Despite this idiosyncrasy his panorama does give some idea of what Avebury and its avenues looked like before their destruction.

Overleaf:

Plate 15. A concentric circle on Machrie Moor, Arran. Such rings are uncommon. The interior of this one had a rough paving of cobbles. Underneath there was a crude and unfinished cist with no trace of bone or pot. (Photo: Mick Sharp)

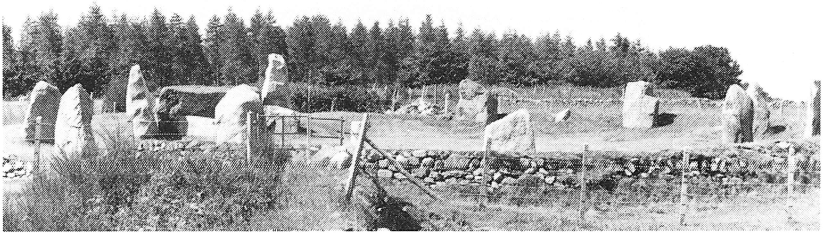
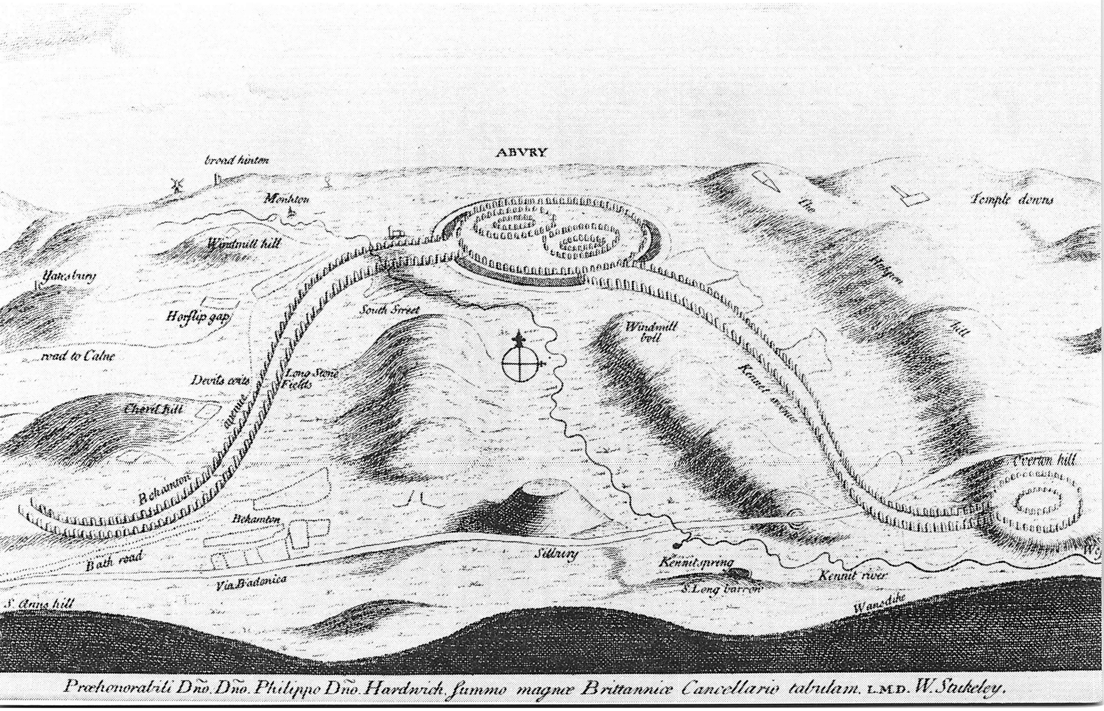
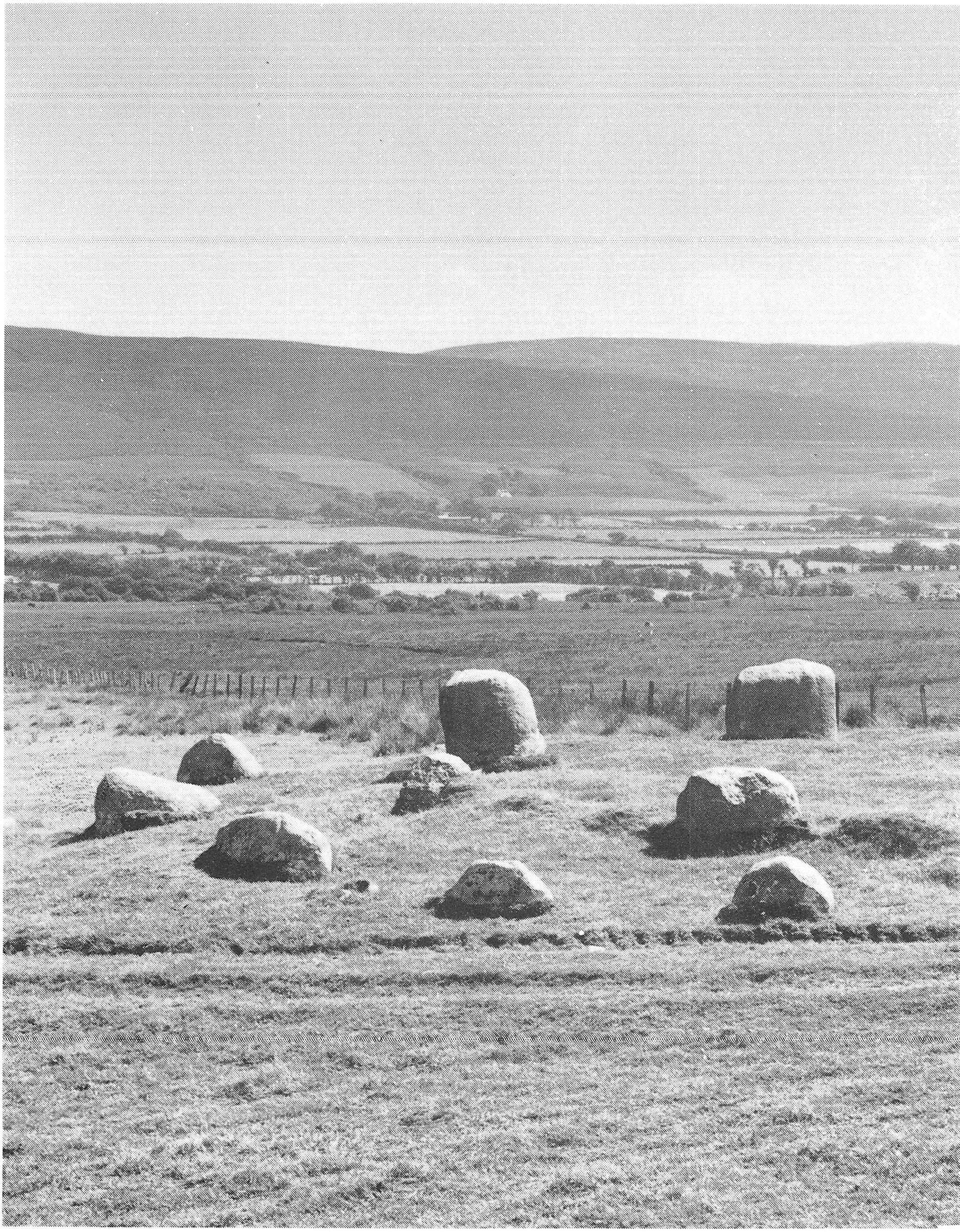
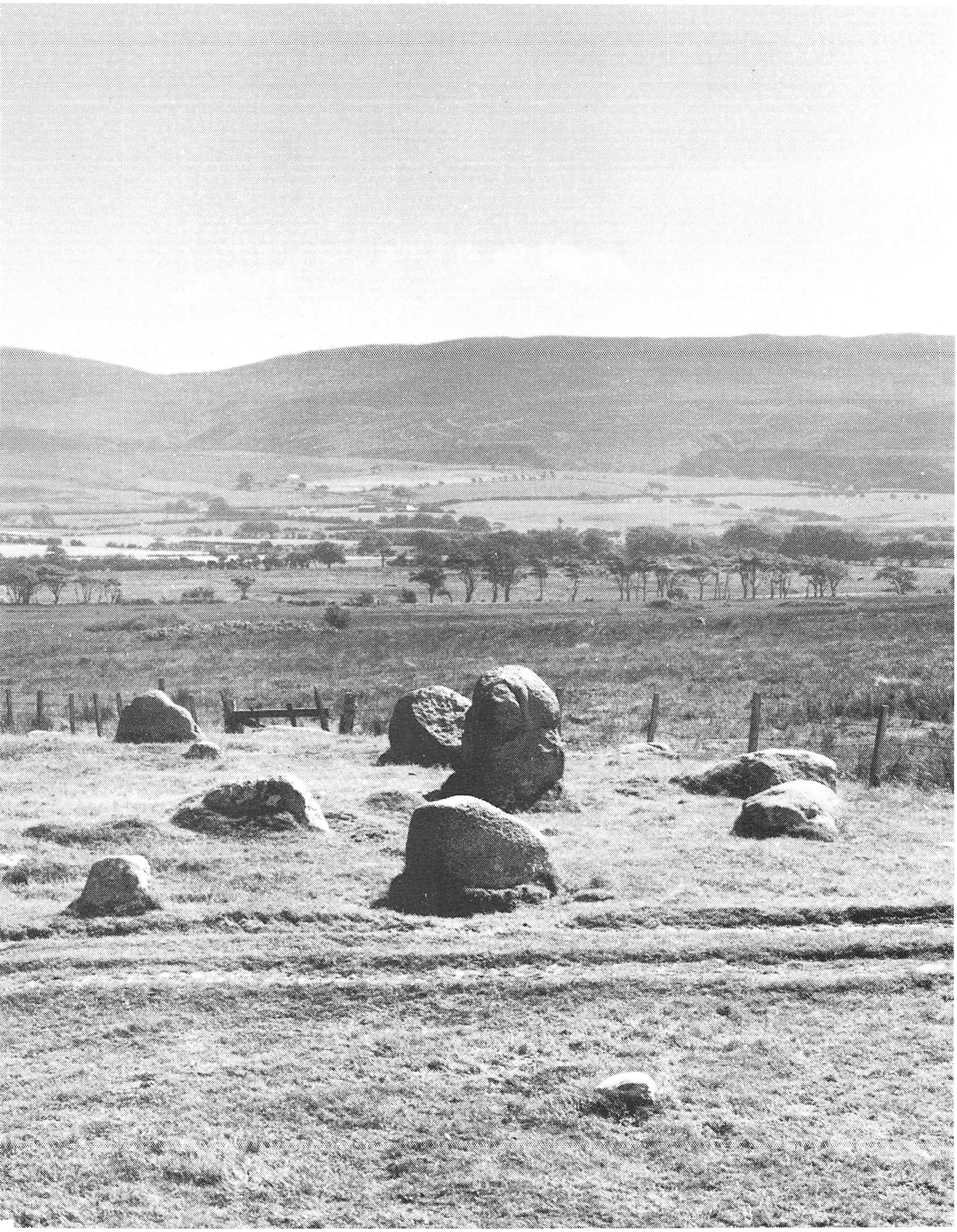


Plate 16. Easter Aquorthies, Aberdeenshire. Despite the obstruction of the modern stone wall the recumbent stone can be seen between its flankers. It is of a reddish stone, unlike the circle stones, which decrease in height away from the recumbent. Those on the east (left) are of pink granite and those to the west are grey.







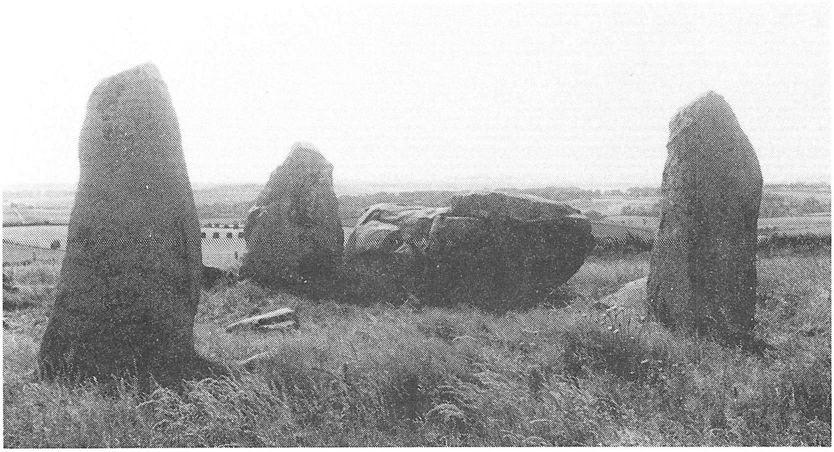


Plate 17. The recumbent stone at Aikey Brae, Aberdeenshire. This massive block weighs about 21 tons. It is made of sandstone whereas the other stones are of reddish granite. They stand in a low, overgrown bank that runs around the circle.

Plate 18. The Cove at Stanton Drew, Avon (see plate 7). The back stone has fallen outwards. The stone on the right was once part of the taller standing stone. The church was built between this prehistoric structure and the great stone circles to the east. Nineteenth-century digging in the Cove revealed only the depredations of earlier treasure-seekers, maybe in Tudor times.

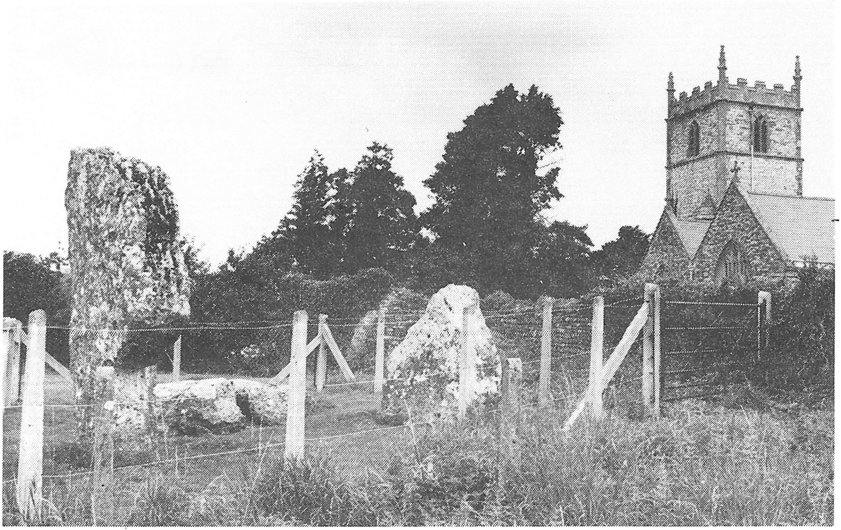
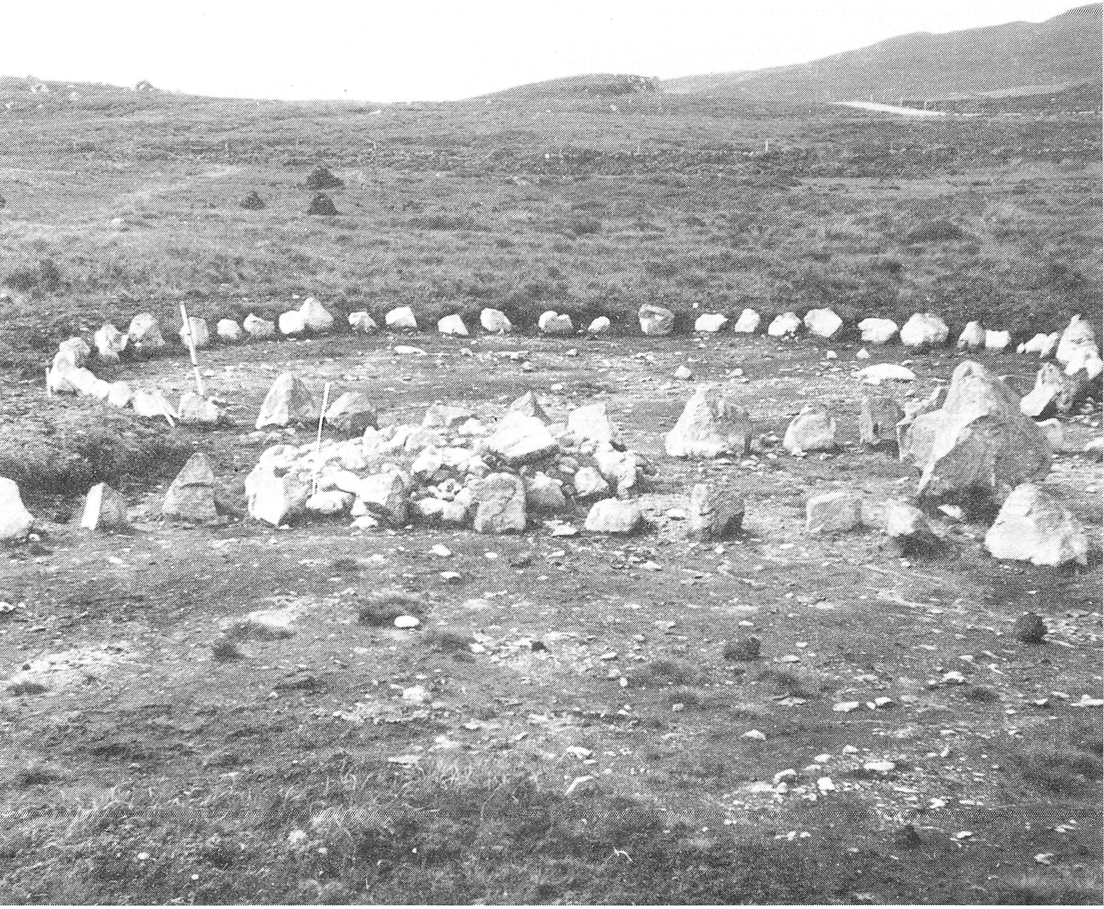


Plate 19. A pair of little rings excavated from the peat at Beaghmore, Co. Tyrone. A tiny cairn can be seen squashed between them. In it was a cist with a stone axe from Tievebulliagh Mountain many miles to the north-east. Carbon-14 dates show that the rings had been built after 1535 ± 55 bc (*c.* 1880 BC) but before 775 ± 55 bc (*c.* 950 BC) when the peat was forming over them. (Photo: Crown Copyright, Historic Monuments Branch, Belfast)



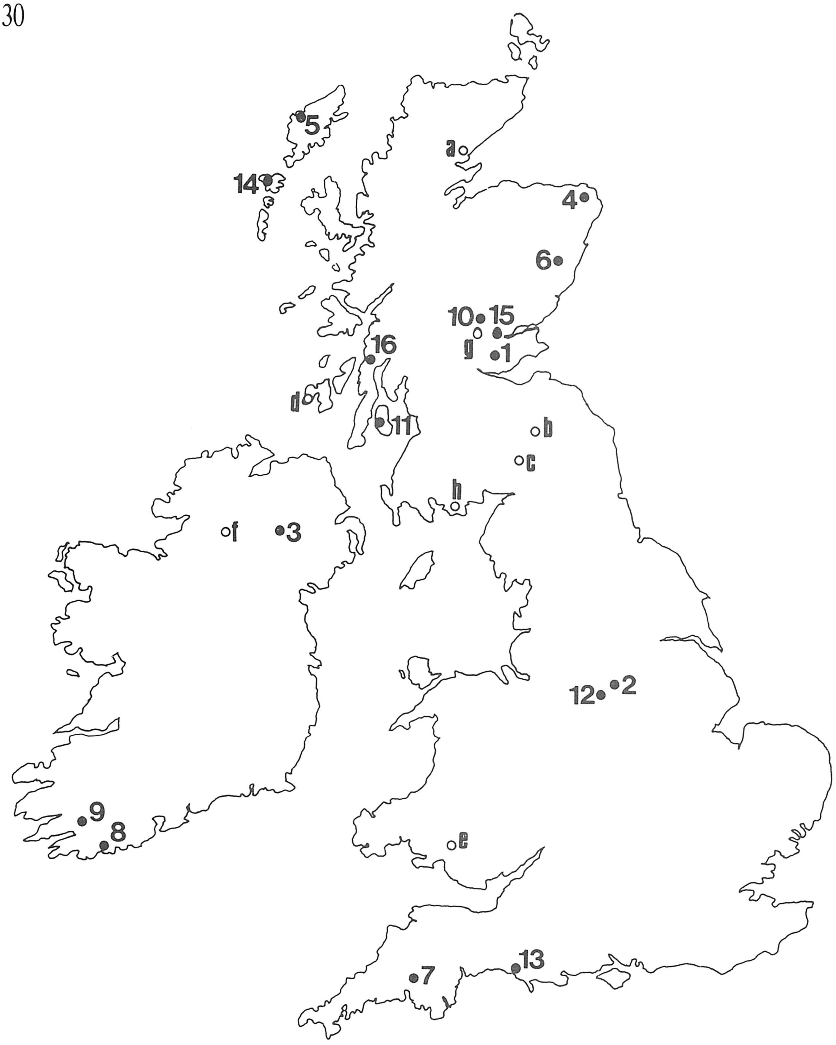


Fig. 3. POSSIBLE CIRCLES OF THE LATE PERIOD. Solid rings stand for sites worth visiting. Open rings represent other circles mentioned in the text.
1 Balbirnie, Fife (NO 285030). 2 Barbrook II, Derbyshire (SK 277758). 3 Beaghmore, Co. Tyrone (H 685842). 4 Berrybrae, Aberdeenshire (NK 028572). 5 Callanish, Lewis (NB 213330). 6 Cullerlie, Aberdeenshire (NJ 785043). 7 Down Tor, Devon (SX 587694). 8 Drombeg, Co. Cork (W 247352). 9 Kealkil, Co. Cork (W 054556). 10 Lundin Farm, Perthshire (NN 882505). 11 Machrie Moor, Isle of Arran (NR 911324). 12 Nine Ladies, Derbyshire (SK 247634). 13 Nine Stones, Dorset (SY 611904). 14 Pobull Fhinn, North Uist (NF 844650). 15 Sandy Road, Perth (NO 132265). 16 Temple Wood, Argyll (NR 826979). a Aberscross, Sutherland. b Borrowston Rigg, Berwickshire. c Burgh Hill, Roxburghshire. d Cultoon, Isle of Islay. e Cerrig Duon, Powys. f Drumskinny, Co. Fermanagh. g Ferntower, Perthshire. h Glenquickan, Kirkcudbright.

5

Late stone circles (*c.* 1975 to 1200 BC)

Early to middle bronze age

It was probably during this final period that most stone circles were put up, small rings of varying shapes, erected in regions of marginal soils on the uplands of Dartmoor, the Peak District, in Ulster and south-west Ireland, in the hills of southern and northern Scotland and around the fringes of the Welsh mountains. One very important group is to be found at Loch Roag on Lewis in the Outer Hebrides.

Ovals predominate but the sites are so small, rarely exceeding 60 feet (18 metres), that frequently it is difficult to decide whether one is surveying a good oval or a poor circle. Many of the sites were so close together that both their size and their proximity suggest that they were the creations of individual families. The weight of the stones does not contradict this. Few of them are megalithic and most could easily have been raised by just a few men and women.

Each region had its own character. In northern Scotland rings were rare but instead there were multiple rows of tiny stones climbing uphill towards round cairns. In central Scotland ovals of six or eight stones intermingled with diminutive rectangles, known as Four-Posters, which almost invariably contained an urned cremation. One such Four-Poster at Ferntower is preserved on a golf course. Another oddly situated ring is the survivor of a graded pair at Sandy Road, Perth, imprisoned in Graystones Close with modern houses all round it. From it came a cremation and a late date for any stone circle of 1200 ± 150 bc (*c.* 1495 BC).

Other rings of stone, hardly to be seen in the wiry grass, rest in the hills of the Cheviots. Circles with stones set in a rubble bank are numerous in the Peak District, most of their inconspicuous cairns robbed of their bones. On Dartmoor even smaller circles surrounded cairns approached by disproportionately long rows of stones. These cairns also have been dug into and their cists emptied but only a few flint arrowheads and bits of pot have reached the museums of Exeter and Plymouth.

Across the Irish Sea circles with recumbent stones, the tallest stones not alongside but opposite the recumbent, are to be seen in south-west Ireland, many of them still in good condition, protected by the superstition that to disturb the stones would be to invoke ill fortune. Some of them have white centre stones like those of Cornwall 200 miles (320 km) away across the waters travelled by early prospectors in search of copper, gold and tin. Further inland, deep in the Boggeragh mountains, even tinier Five-Stone rings were built, a thin recumbent and four stones so low that a child could sit upon them. Little has come from these Cork-Kerry sites apart from the expected flecks of human bone. The same is true of the densely packed rings of Ulster.

These unobtrusive monuments often have thirty or more closely set stones around their perimeter. Many have cairns inside them and a setting of two or three tall pillars at a tangent to the ring. A whole complex of circles was engulfed in the peat of Beaghmore (plate 19) — three pairs of rings with cairns trapped between them and with rows of stones leading to them from the north-east. A cremation lacking its skull came from a cist in one of the cairns.

The association between burial-cairn and circle was even stronger in this than in earlier periods, whether in the isolated Caithness rings like Aberscross with its cist and half-burned armbones, or in the Peak District, where people lit a fire inside the embanked ring at Barbrook after they had placed a cremation in a cupmarked cist, or on Dartmoor, or in the cists and boulder-graves and cairns of Ireland, or even on Lewis in the Outer Hebrides.

Here, on the once fertile sandy soils around Loch Roag, separate groups put up several rings, all different in shape, size and architecture. The most famous is the dramatic Callanish with its radiating avenue and unfinished rows (plate 20). Although its central pillar was 17 feet long (5 metres), it was less than 7 tons in weight and could have been hauled upright by twenty or thirty people without much trouble. Even this ring had a burial. One of the smallest chambered tombs in the British Isles was squashed inside the circle. Scraps of cremated bone were found in 1857.

There is no evidence that any stone circle was built in the British Isles after 1200 BC. A deterioration in the climate caused the abandonment of many upland rings, and changes in religious belief may have led to the neglect of others. The latest known date for any circle is *c.* 1200 BC for Cashelkeelty, a Five-Stone ring in Co. Kerry. And that ring, too, was shortly deserted to the rains and the growing peat.

Opposite page:
Plate 20. Aerial view of Callanish by Loch Roag on the island of Lewis, Outer Hebrides. Many of the stones have been re-erected after the removal of peat in the nineteenth century. A small passage-grave can just be seen between the central pillar of the circle and its outer stones. The parallel strips in the surrounding fields are the result of peat cutting. (Photo: Crown Copyright, Department of the Environment, Edinburgh)

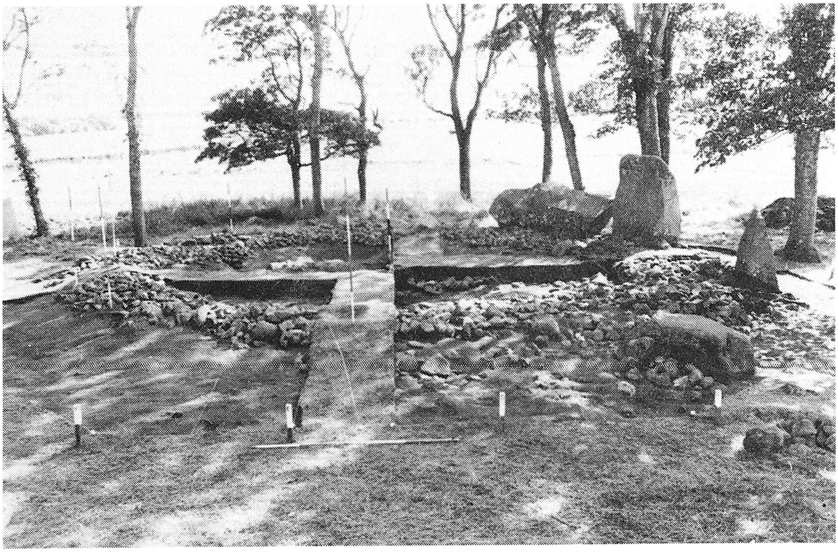


Plate 22. Berrybrae recumbent stone circle, Aberdeenshire, seen from the north. The author's excavations of 1975-8 revealed that this ring had been despoiled in antiquity. In this photograph a stone at the north-west can be seen lying in the foreground but all the eastern stones have been smashed and are hidden in the rough wall of stones around the circumference. Cremated human bone, broken pottery and flint tools were discovered in the centre of the ring.

Opposite page:

Plate 21. Circle II, Machrie Moor, Arran. This ring once had seven or eight stones but the others were broken up to make millstones. Two cists, one with a prehistoric pot and four flint arrowheads, were found inside the ring when it was excavated in 1861. (Photo: Mick Sharp)

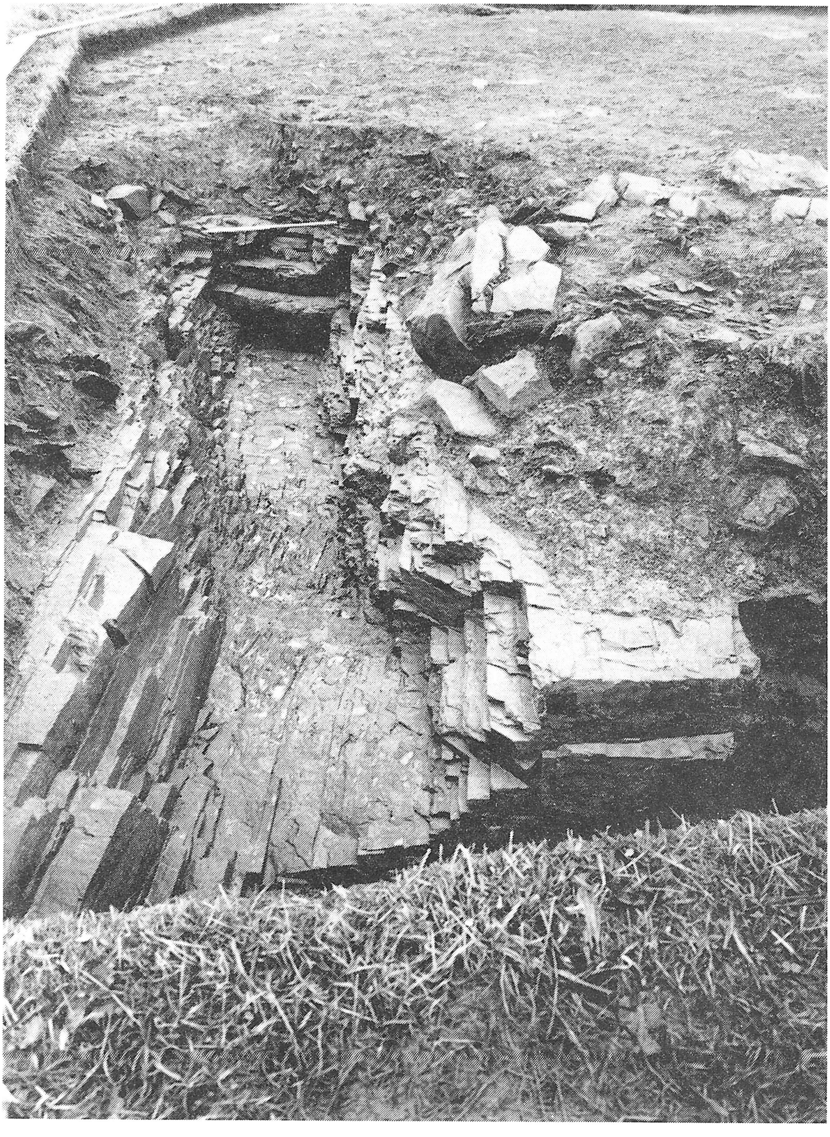


Plate 23. The Stones of Stenness, Orkney. Recent excavation of this circle-henge showed that the builders had quarried through 3 feet (1 metre) of solid sandstone when they were digging out the ditch that surrounded the circle. Sherds of grooved ware were found near this north-east entrance.

6

Stonehenge (*c.* 3200 to 1000 BC)

Stonehenge with its incredible shaped lintels was unlike any other stone circle in the British Isles. This is not surprising. There was no good building stone on Salisbury Plain, and the nearest megalithic tomb was over 14 miles (23 km) away at Tisbury and Fosbury. Stonehenge was not simply a stone circle. It was a representation in enduring stone of a timber building that had been erected on the site over a thousand years earlier around 3200 BC, a vast roofed mortuary house nearly 100 feet (30 metres) across in which the neolithic dead lay until their skeletons were removed for burial in the many long barrows in the vicinity.

The banks and ditch of a henge 320 feet (98 metres) in diameter were laid out around the building. There was a causeway at the exact south. There was also a wider north-east entrance aligned upon the midwinter moonrise, the outlying Heel Stone standing midway between the swing of the moon from north-east to NNE and back again over its 18.6 year cycle.

In the late neolithic period burials were added. Twenty-five cremations have come from the Aubrey Holes, the ring of fifty-six chalk-cut pits dug around the inner edge of the bank. With them were long bone pins, flints and sherds of pottery. There were also some thirty other cremations in the ditch and near the bank, one of them with a lovely stone macehead that was meticulously deposited in line with the southern moonrise. Then, near 2400 BC, Stonehenge was deserted.

Two centuries later Welsh bluestones, probably lying 7 or 8 miles (*c.* 12 km) away, were brought to stand in two concentric circles where the decayed mortuary house had been. An earth-banked avenue led up to the north-east entrance, which was narrowed to be in line with the midsummer sunrise, suggesting a radical change from a lunar to a solar cult.

Just inside the bank the short sides of a rectangle of four stones known as the Four Stations (plate 24) pointed to this midsummer sunrise, the long sides to the north-western setting of the moon (fig. 4). This was possible because, by coincidence, Stonehenge was built close to the latitude where these celestial phenomena occurred at right-angles to each other. It is arguable that the designers chose to construct a rectangle rather than a square so that the ESE-WNW diagonal could

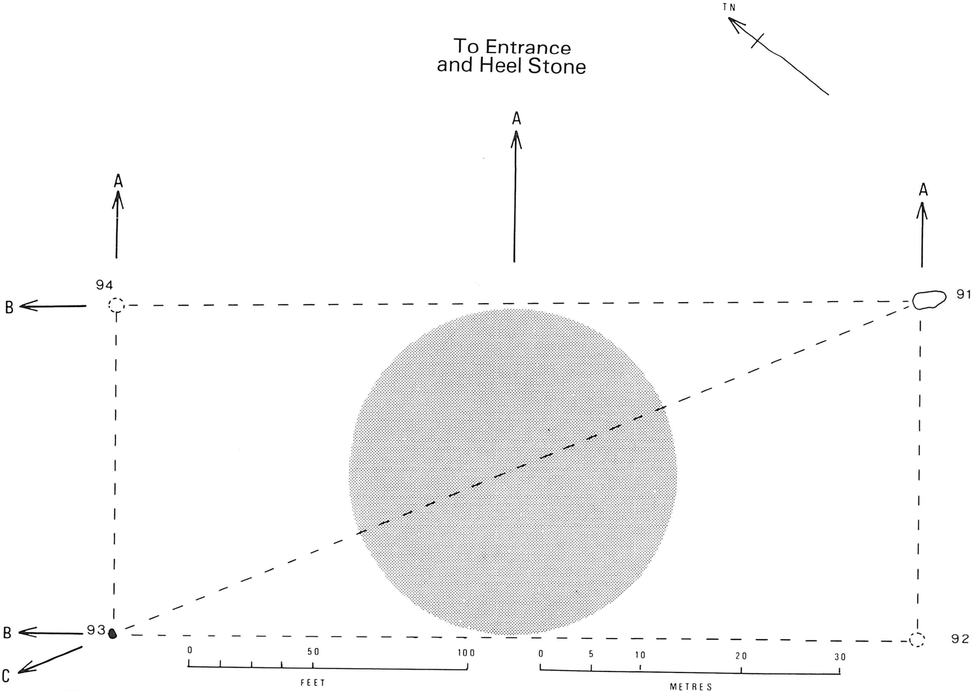


Fig. 4. THE FOUR STATIONS 'RECTANGLE' AT STONEHENGE. Of the four original stones, no. 91 is fallen, nos. 92 and 94 have been removed, and only stone 93 remains standing. *A* indicates the direction of midsummer sunrise. *B* indicates the direction of extreme moonset. *C* indicates the direction of May Day sunset. The stippled area shows the position of the later sarsen circle.

point to sunset on 1st May, an occasion that iron age Celts still celebrated two thousand years later in their great fire-festival of Beltane.

There was more disruption. The work stopped. The bluestone rings, still unfinished, were uprooted and, around 2100 BC, ponderous sandstone slabs known as sarsens were laboriously manhandled from the Marlborough Downs 20 miles (32 km) to the north.

Five towering archways known as trilithons were set up in a horseshoe shape open to the north-east and were enclosed in a great lintelled circle 97 feet (30 metres) across.

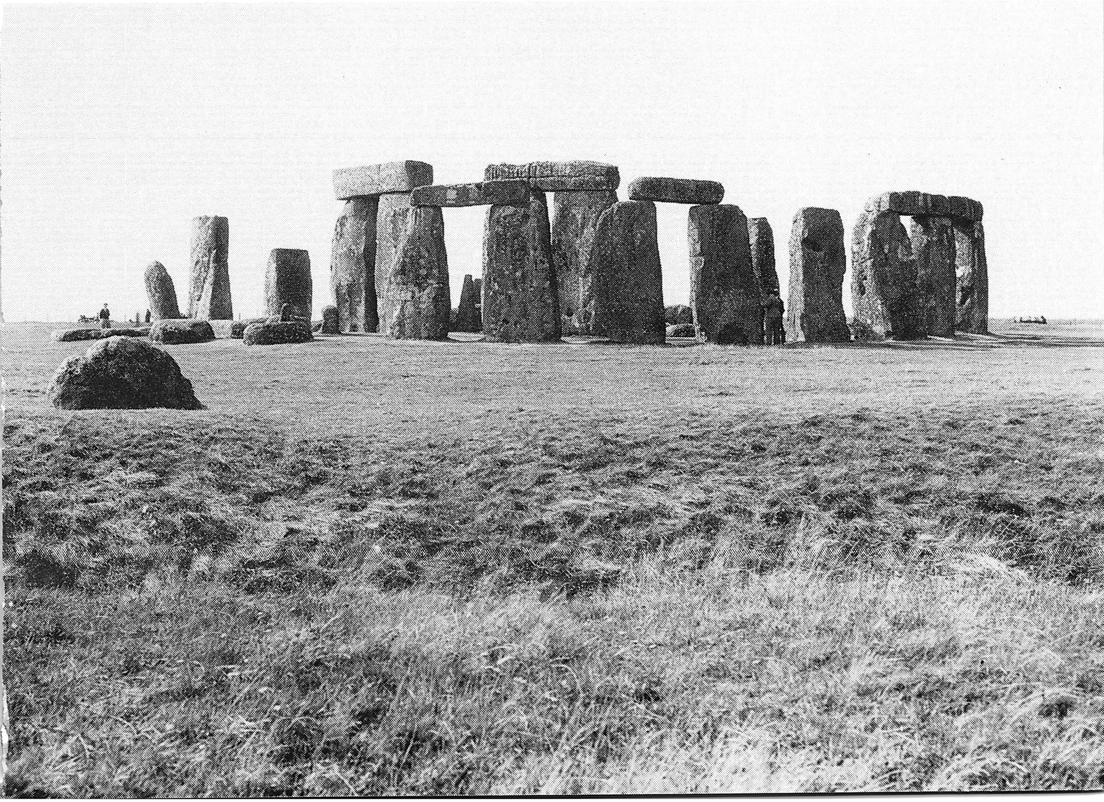
Visual effect was everything. Despite the monument's appearance of stability it was an architectural disaster. To ensure that they were of the desired height some stones had foundations that were dangerously insecure. The result was an impressive but ramshackle edifice.

Before their erection these monstrous sarsens were treated just as carpenters would have dealt with wood — smoothed, chamfered, rebated, mortise-and-tenon jointed — to imitate the ring-beams of the vanished mortuary house. It is this that sets Stonehenge apart. It was the accomplishment of woodworkers who chose to build in lasting stone. The result was the intriguing and awesome ring that looms in shattered magnificence today, a megalithic triumph.

Carvings of axes and a dagger on the stones link this last phase of Stonehenge with the cult of a protectress of the dead in Brittany.

The sombre, heavy temple stood in precarious dominance for a few centuries before the wind and the rain and the snow ravaged the unsafe south-western stones. They fell. And, like all other stone circles, by 1000 BC Stonehenge was abandoned.

Plate 24. Stonehenge from the east. Stone 91, the fallen sarsen of the Four Stations rectangle, is in the foreground.



7

Current work on stone circles

It was over three hundred years ago that the brilliant antiquarian John Aubrey perceived that there were stone circles in regions where neither Roman, Saxon nor Dane had reached. Realising, therefore, that the rings must be native and ancient, he wrote: 'all these Monuments are of the same fashion, and antique rudenesse; wherfore I Conclude, that they were erected by the Britons: and were Temples of the Druids.'

He could not know that the circles were even older than the iron age, when the Druids flourished. Indeed, as recently as 1933 the great prehistorian Gordon Childe, misled by the pottery, wrote that 'Recumbent Stone Circles may have been erected in Late Halstatt times' and suggested an iron-age date for the Scottish rings.

It is only with the development of objective, absolute dating techniques that we are able to place the rings in their rightful neolithic and bronze-age contexts. This helps in an understanding of stone circles because they can now be seen against a background of early farming societies existing in dispersed family groups, making pottery, using stone and flint tools and constructing huge monuments in which human bones were stored until they were removed for ceremonies that we can only vaguely comprehend. It was the short-lived people of those times who raised the megalithic rings.

Since the late 1950s, stimulated by the researches of the late Professor Alexander Thom, who with his son, Archie, surveyed a great number of stone circles, there has been much speculation about the mathematical and astronomical knowledge of their societies. Thom suggested that 'Megalithic Man' had developed an ultra-precise measuring rod which he used to lay out triangular templates as the basis for symmetrical non-circular rings like the egg-shapes of Borrowston Rigg and Burgh Hill in southern Scotland. According to Thom this was done to achieve a circumference that was an integral multiple of their unit of length. Many of the rings such as Temple Wood, Argyll, the Ring of Brodgar, Orkneys, and Callanish in the Hebrides were also astronomical instruments for the prediction of lunar eclipses.

Some astronomers have reacted enthusiastically to these ideas but many archaeologists remain sceptical of theories of an intellectual elite setting out right-angle triangles and computing the irrational pi two thousand years before Pythagoras. In his *Science and Society in Prehistoric Britain*

Euan MacKie has explained how he believes Thom's hypotheses can be reconciled with other archaeological evidence. Here there is room only to make some general points about Thom's work and its implications in a study of stone circles.

Thom proposed that a yardstick, his megalithic yard of 2.72 feet (0.829 metre), accurate to an amazing 0.003 feet (0.09 cm), was used all over Britain and Brittany and that measuring-rods were sent out from a national centre, perhaps Avebury, whenever a circle was to be built, even in regions as remote as western Wales or the Shetlands. Other primitive societies have simply used body measurements when erecting houses or ritual circles: the span, or thumb to outstretched little finger, of about 9 inches (23 cm); the cubit, or forearm, of 18 to 22 inches (51-56 cm); the body-yard, or nose to end of the extended arm, of about 36 inches (90 cm); or the body-fathom, tip to tip of outstretched arms, around 6 feet (1.8 m). If such measurements were used in prehistoric Britain they would inevitably have varied from locality to locality. It is significant that a recent analysis of Thom's own data indicates that such local variations exist amongst British stone circles.

Other investigations suggested that the circle-builders had only very basic numbering systems of threes or fours, counting 1, 2, 3, 3+1, 3+2, 3+3, 3+3+1, or 1, 2, 3,4, 4+1 and so on, making it difficult for them to compute large numbers accurately. This accords with what is known of comparable primitive societies.

It has rarely been disputed that there are non-circular rings. The real debates are about the techniques for planning them and the reasons for ovals and the like. From the evidence of artefacts there seems to have been a straightforward chronological evolution from circle to oval and perhaps to the elaborate egg and compound shapes. As well as Thom's Pythagorean triangles, however, there are other methods by which these rings might have been designed, some even set out by eye alone, none of them requiring advanced arithmetical knowledge. It appears also that some rings such as Woodhenge were laid out as ovals so that the long axis would point to an important solar or lunar event.

Since the late eighteenth century it has been believed that people in neolithic Britain envisaged a relationship between the sun and their own concepts of life and death. The easterly orientation of many long burial mounds reveals this. The passage at Newgrange was directed towards the midwinter sunrise. The entrance of the equally fine chambered tomb of Maeshowe on the Orkneys was aligned on midwinter sunset.

This evidence and the apparent alignments at Stonehenge provide powerful support for the supposition that builders of megalithic monuments were aware of solar and lunar movements. This is a long way from believing that this knowledge was used for 'scientific' purposes. Many of the claimed sightlines in stone circles are far too short and diffuse for truly accurate observations. As an example, it has been asserted that the circle and avenues at Callanish were intended as an astronomical calendar or computer around 1800 BC but a detailed examination of forty-six possible lines there failed to detect even one accurate alignment. The only hint of astronomical precision came from a row of stones 2 miles (3.2 km) away. Even there the four surveyors concluded 'that the one accurate astronomical indication at Callanish could easily have occurred by chance'. With such uncertainty the traditional interpretation of stone circles as ritual temples must remain the most plausible.

The presence of human bone in them, the traces of fires, the fragments of pottery sometimes deliberately broken, the nearness to water, the internal structures reminiscent of megalithic tombs, the associations with the sun, all combine in scenes of communities engaging in seasonal ceremonies, making offerings in rites made powerful by the manipulation of the dead. That rhythmic, almost hypnotic dancing occurred in the rings is suggested not only by the many legends of petrified dancers but by the very shapes of the rings.

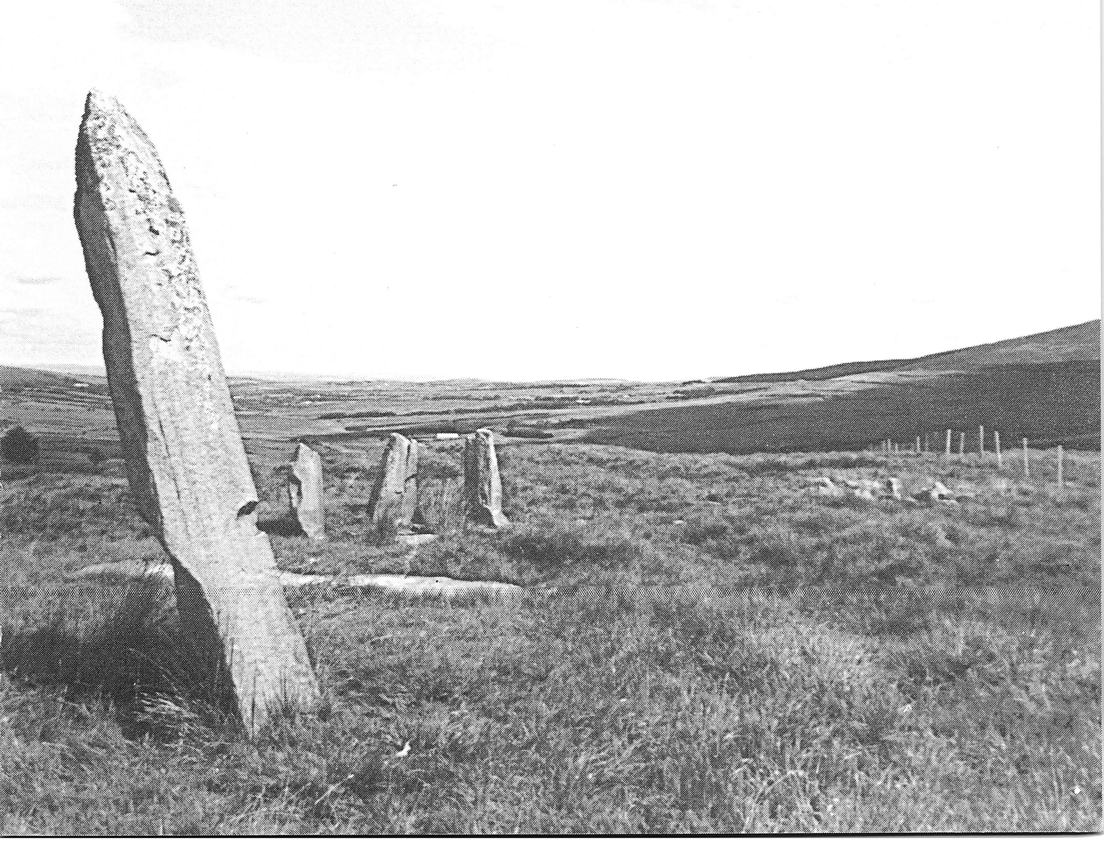
It is fitting to end with a word of caution. A visitor to a stone circle today almost certainly does not see what the original builders erected. This is not just because four thousand years of weather and men have toppled stones, changed ground levels and worn down banks, although all this is true and makes good surveys of unexcavated rings very difficult (plate 21). More important is what happened to the ring in antiquity.

Excavations at the Sanctuary in Wiltshire, at Croft Moraig in Perthshire and Machrie Moor (plate 4) have shown that frequently the first ring on the site was an unsuspected setting of posts, often of a different number and diameter from the later stone circle. In other instances circles were altered. At Stenness some stones may have been removed when the rock-cut ditch was dug. Other rings may have been abandoned half-finished. This may have happened at Callanish, explaining why there are off-centre rows there, the uncompleted sides of intended avenues. At Cultoon on the island of Islay the circle-stones had never been set up and were left lying near the holes that had been prepared for their bases. Geometrical and astronomical theories obtained from rings like these are likely to be misleading.

Even more distracting to the archaeologist are the circles that were destroyed in prehistoric times by members of another sect. It happened to Stonehenge's bluestones and at Bryn Celli Ddu on Anglesey. At Berrybrae in north-east Aberdeenshire a little recumbent stone circle with central ring-cairn was desecrated around 1700 BC (plate 22). The cobbles of the ring-cairn were piled untidily against the bank that supported the standing stones. The tops of these stones were smashed, leaving their stumps leaning unevenly amongst the rubble. Only the recumbent and its flankers were left entire.

But then, as if fearful of the disturbed and vengeful spirits, the wreckers placed a neat stack of freshly broken urn-sherds in a niche by one stone and set a beaker upright by another. It was people just as insecure and superstitious who built and used the stone circles of the British Isles.

Plate 25. The outlying pair of pillars, one fallen, and the Five-Stone ring of Knocknakilla in Co. Cork, one of the latest stone circles in the British Isles. The remains of a low burial-cairn can be seen on the right.



8

Fifty sites to visit

This list is not comprehensive but consists of those stone circles the author has most enjoyed going to. There are many other interesting rings and good guidebooks will provide the reader with details. I would recommend those published by Batsford: *Guide to Prehistoric Scotland* by R. Feachem, 1977; *Prehistoric and Early Christian Ireland* by E. Evans, 1966; and *Guide to Prehistoric England* by N. Thomas, 1976. There is also James Dyer's excellent *Penguin Guide to Prehistoric England and Wales,* Allen Lane, 1981.

Arbor Low, Derbyshire. SK 160 636. *8½ miles south-east of Buxton.*
(Plate 26). A great circle-henge, its stones all fallen. Short walk. By the central collapsed Cove a skeleton was discovered in 1902. A round barrow has been added to the bank at the south. Gib Hill, a neolithic round barrow, is 350 yards (320 metres) to the south-west. *Charge.*

Avebury, Wiltshire. SU 103 700. *7 miles west of Marlborough.*
(Plate 8). Inside an enormous bank and ditch broken by four entrances is the largest of all stone circles. Remains of two smaller rings can be seen inside it, the northern having two stones of a damaged Cove. An avenue of stones extends from the southern entrance towards the Sanctuary circle on Overton Hill 1½ miles away. Two stones of the west avenue and Cove stand in a field half a mile to the west. Visit the small museum. *Charge.*

Aviemore, Inverness. NH 896 134. *In a housing estate.*
A well preserved ring-cairn, its kerbstones graded up to the SSW, and with the remains of a stone circle around it.

Balbirnie, Fife. NO 285 030. *6 miles north of Kirkcaldy.*
(Plate 6). Cists were added to this circle, some of their slabs being decorated with cups and cup-and-ring marks.

Ballynoe, Co. Down. J 481 404. *2½ miles south of Downpatrick.*
A great circle with an entrance of double portals at the west. 'Outlying' stones may be erratics. An oval mound containing cists and cremations was added in the bronze age.

Balnuaran of Clava, Inverness. NH 756 443. *5½ miles east of Inverness.*
Two passage-graves and an intervening ring-cairn, surrounded by circles and built on artificial mounds, stand in a NE-SW line. The stones are graded in height to the south-west. The passages seem to be aligned

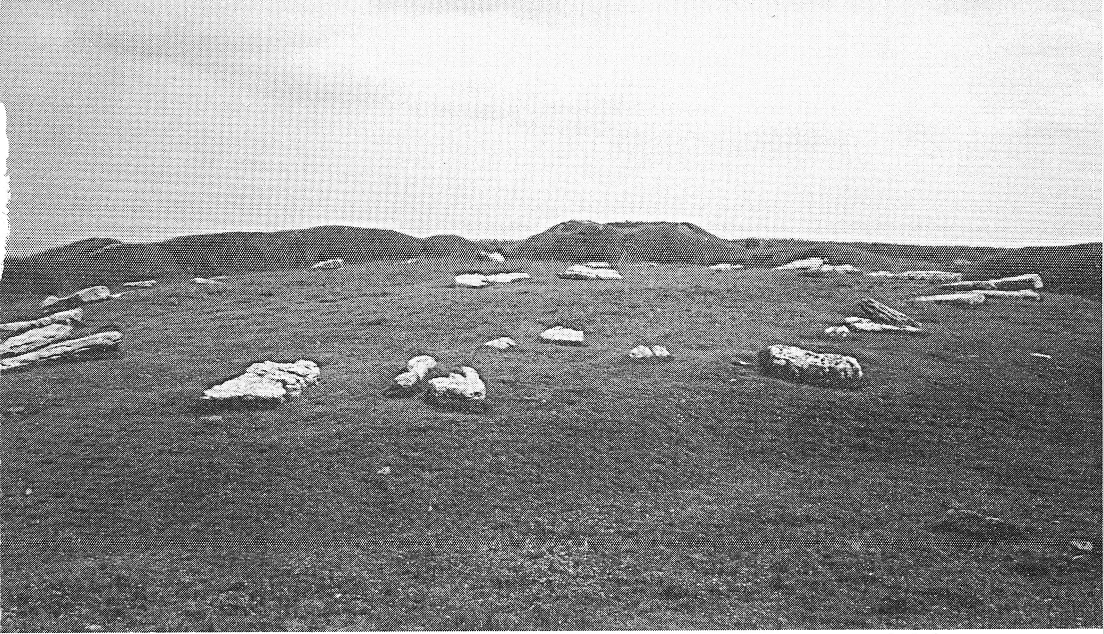


Plate 26. Arbor Low circle-henge from the north-west. In the centre of the stone circle is a collapsed Cove. In the background is a later round barrow that was dug into in the nineteenth century.

on the midwinter sunset. There are cupmarks in the south-west chamber and on a kerbstone of the north-east passage-grave.

Beaghmore, Co. Tyrone. H 685 842. *8½ miles WNW of Cookstown.*

(Plate 19). Uncovered from the peat in 1945-9 there are no fewer than seven stone circles here with radiating rows and with small cairns between them. Cists contained pottery, charcoal, flints and broken skull fragments.

Beltany Tops, Co. Donegal. C 255 003. *2 miles south of Raphoe.*

A short walk leads to this fine circle with an outlying stone to its south-east. The tallest stone is at the WSW and opposite is a low, triangular stone with many cupmarks. It is said to be in line with sunrise on 1st May, the festival of Beltane as the circle's name implies.

Bohonagh, Co. Cork. W 308 368. *1½ miles east of Ross Carbery.*

This impressive Irish recumbent stone circle has a recumbent at the west in line with the equinoctial sunsets. The two 'portals' opposite are 8 feet (2.4 metres) high. Excavation in 1959 discovered a central cremation.

Boscawen-Un, Cornwall. SW 412 274. *1 mile north of St Buryan.*

(Plate 13). A good but rather overgrown circle. A quartz stone stands at the south-west and in the centre is a long, leaning pillar.

Brisworthy, Devon. SX 565 655. *3 miles ESE of Yelverton.*

A quarter-mile walk across the moor reaches this plain ring whose stones are graded in height towards the north. The Legis Tor settlement and the Ringmoor stone circle and row are both within a quarter of a mile.

Brodgar, Ring of, Orkneys. HY 294 133.
4 miles north-east of Stromness.

(Plate 27). One of the finest circle-henges in these islands, 340 feet (104 metres) across, it is a perfect circle standing inside a rock-cut ditch. To the south-east is the outlying Comet Stone and across the narrow isthmus are the remains of another circle-henge, Stenness.

Cairnpapple, West Lothian. NS 987 717. *1¼ miles ESE of Torphichen.*

In sequence there had been a Cove here, followed by a circle-henge that was destroyed when a huge cairn was erected. Later enlarged, it can now be entered via an internal ladder. *Charge.*

Callanish, Lewis, Outer Hebrides. NB 213 330.
13 miles west of Stornoway.

(Plate 20). A fine though small circle with a spectacular central pillar. A tiny passage-grave was added to it. Nearby are circles at Cnoc Fillibhir (NB 225335), Garynahine (NB 230303), and Loch Roag (NB 222335).

Carrigagulla, Co. Cork. W 370 834. *8 miles north-west of Coachford.*

(Plate 28). This is a lovely Irish recumbent stone circle with a low central stone. At W 371838 in a plantation is a good Five-Stone ring.

Plate 27. The Ring of Brodgar from the south-east. The pillar in the foreground is the outlying Comet Stone, so-called because in the eighteenth century Brodgar was thought to be the Temple of the Sun and the nearby Stenness, from its crescent shape, the Temple of the Moon.

Castlerigg, Cumbria. NY 292 236. *1½ miles east of Keswick.*

This is one of the most evocative of stone circles, standing as it does in a panorama of hills and mountains. There is a wide entrance at the north, and a tall radially set pillar at the south-east in line with the Candlemas sunrise. Against it is a strange rectangle of low stones. The 'outlier' at the south-west is not a prehistoric feature.

Cong, Co. Mayo. M 163 559. *1 mile north-east of Cong.*

Four little-known, intriguingly different rings stand in separate but adjoining fields: a plain circle; a huge embanked ring; a cairn-circle; and a variant recumbent stone circle. The nearest is 150 yards (140 metres) east of the L101 by Deanery Place and visible from the road.

Corrimony, Inverness. NH 383 303. *8 miles west of Drumnadrochit.*

Inside the stone circle is a well reconstructed Clava passage-grave with its cupmarked capstone now lying on top of the unroofed cairn. On the sandy floor of the chamber was the stain of a vanished burial.

Cothiemuir Wood, Aberdeen. NJ 617 198. *3½ miles north-east of Alford.*

A short walk through the trees north of the lane from Keig to My Lord's Throat leads to a splendid example of a recumbent stone and its tall flankers. Near the centre of the circle is a disturbed cist. There are cupmarks on the outer face of the recumbent at its west end.

Croft Moraig, Perthshire. NN 797 472. *4 miles WSW of Aberfeldy.*

A circle of twelve heavy stones with two more forming an eastern entrance surrounds a south-west facing horseshoe of tall stones. A supine cupmarked stone lies at the south-west on a rubbly bank. Quartz had been strewn inside the ring, which succeeded an original horseshoe of posts.

Down Tor, Devon. SX 589 694. *4½ miles ENE of Yelverton.*

A walk of three-quarters of a mile. A stone circle with internal cairn is approached uphill by a stone row 1145 feet (349 metres) long, with a tall terminal pillar at its north-east end. There are hut-circles and a pound beyond it.

Drombeg, Co. Cork. W 247 352. *1½ miles east of Glandore.*

This is the most famous of Irish recumbent stone circles, well preserved and with two hut-circles and a 'cooking-place' nearby. There are two cupmarks on the recumbent which is almost in line with the midwinter sunset. A central pit held the cremated bones of a youth.

Druids Circle, Gwynedd. SH 722 746. *3¾ miles south-west of Conwy.*

(Plate 10). A long steep walk up Penmaenmawr (cars can be driven

Plate 28. Carrigagulla, Co. Cork. About 30 feet (9 metres) in diameter, this ring is typical of the larger Cork-Kerry recumbent stone circles. The long, low recumbent on the left faces WSW and the tall portals stand opposite. Notice the small centre stone.

halfway to parking area) but well worth it. Notice the ruined Red Farm circle (SH 732750) and a Five-Stone ring (SH 725747) before reaching this large embanked circle with a south-west entrance. Excavation in 1958 discovered the cremations of children (sacrifices?) in central cists. Just beyond is a ring-cairn.

Easter Aquorthies, Aberdeenshire. NJ 732 208.

2½ miles west of Inverurie.

(Plate 16). This is a fine recumbent stone circle. The western stones are of grey granite, the others lighter pink granite from the Bennachies.

Fernworthy, Devon. SX 655 841. *3½ miles south-west of Chagford.*

A neat circle of thirty stones graded in height to the south. A damaged double stone row approaches it from the north.

Glenquickan, Kirkcudbright. NX 509 582. *2½ miles east of Creetown.*

Difficult access because of barbed-wired fields. A ring of low blocks encircles an impressive pillar 6 feet (1.8 metres) high. There is a similar but damaged ring at Claughreid (NX 517560) 1½ miles SSE.

Goatstones, Northumberland. NY 829 748.

2¾ miles north-west of Simonburn.

A few hundred yards from the road and behind Ravensheugh Crags is a delightful Four-Poster about 16 feet (5 metres) square. The top of the south-east stone is cupmarked.

Grange, Co. Limerick. R 640 410. *12 miles SSE of Limerick.*

Sometimes known as the Lios, this great embanked circle, 150 feet (46 metres) in diameter, has a paved eastern entrance, opposite which are two tall stones like a gunsight. Neolithic and beaker sherds were found under the gravelly floor. In the next field is a small circle and across the road are the faint remains of a larger one.

Grey Croft, Cumbria. NY 034 024. *2¼ miles WSW of Gosforth.*

Approach from Seascale golf-course. Three-quarters of a mile walk. Close to the sea, this is an attractive circle, 89 feet (27 metres) across, once of twelve stones. Two are missing. There is a small northern outlier. Excavation in 1949 of a central cairn recovered flints, cremations and a jet ring.

Grey Wethers, Devon. SX 638 832. *2½ miles north of Postbridge.*

(Plate 11). 1½ mile walk along Fernworthy Forest track then west across the moor. Two plain but imposing stone circles, restored in the nineteenth century, stand side by side. Charcoal had been strewn inside them.

Kealkil, Co. Cork. W 055 555. *6 miles NNE of Bantry.*

This squat Five-Stone ring has a pair of tall pillars to its north-east and a low cairn to the east. Excavation in 1938 recovered no artefacts.

Knocknakilla, Co. Cork. W 297 841. *3½ miles SSE of Millstreet.*

(Plate 25). A pair of stones, one 12½ feet (3.8 metres) high, stood by this Five-Stone ring which, with its adjacent round cairn, is almost identical to Kealkil. Excavation in 1931 found white quartz pebbles around the northern portal stones.

Lettergorman, Co. Cork. W 267 473.
4 miles south-east of Dunmanway.

This is a rare example of an Irish Four-Poster. Three stones, each about 8 feet (2.4 metres) high, stand at the corners of a neat oblong from which a pillar has been removed. To the west there is an outlier.

Loanhead of Daviot, Aberdeenshire. NJ 747 288.
5 miles NNW of Inverurie.

This recumbent stone circle has a fine ring-cairn and a cupmarked stone east of the east flanker. The site was levelled to receive the circle, whose recumbent was placed in line with the southern moonset. Before the ring-cairn was built a pyre had burned in the ring. From it came human bone including '50 pieces of skull bones of [young] children'. To the east is an enclosed cremation cemetery.

Long Meg and Her Daughters, Cumbria. NY 571 373.
2¼ miles north of Langwathby.

An enormous 'flattened' circle. Huge blocks lie at east and west, and at the south-west is an entrance of double portals. Beyond it stands

Long Meg in line with the midwinter sunset. This tall outlier is decorated with a spiral and concentric circles.

Lundin Farm, Perthshire. NN 882 505.

1¾ miles north-east of Aberfeldy.

A spectacular Four-Poster on a natural mound into which cremated bone, an urn and a beaker were placed. Just to the north is a cupmarked outcrop, and to the south-east is a fallen cupmarked outlier.

Machrie Moor, Arran. NR 912 324. *2¾ miles north of Blackwaterfoot.*

1½ mile walk. No fewer than six different stone circles can be seen here, first a cairn-circle at Moss Farm, then, half a mile further into the moor, a concentric (plate 15), a possible Four-Poster, three plain rings (plate 21) and a 'new' ring excavated in 1978 (plate 4). 1¼ miles NNE is the Auchagallon variant recumbent stone circle (NR 893346).

Merry Maidens, Cornwall. SW 432 245.

1½ miles south-east of St Buryan.

A lovely, almost perfect plain ring with a possible east entrance. By the road downhill from the circle is the Tregiffian chambered tomb with a cupmarked entrance.

Pobull Fhinn, North Uist. NF 844 650. *5 miles WSW of Lochmaddy.*

Perhaps in the loveliest setting of all stone circles, this large and irregular ring overlooks a countryside of lochs and moorland. With possible entrances at east and west the stones stand in a bank on an artificially levelled terrace.

Rollright Stones, Oxfordshire. SP 296 308.

2¼ miles north-west of Chipping Norton.

(Plate 9). A circle of ragged limestones has a portal dolmen in the field to its east and an outlying pillar, the King Stone, to its north-east. Legends of witchcraft are associated with this attractive ring.

Sanctuary, Wiltshire. SU 118 679 *5 miles west of Marlborough.*

No stone survives of this important ring, destroyed in 1723. Despite the ugly concrete blocks and pillars that represent its stones and posts, it is worth a visit for its association with Avebury and the Kennet Avenue. Concentric stone circles succeeded several timber structures, one of which may have been a neolithic charnel house. The site lies by the prehistoric Ridgeway near several bronze age round barrows.

Stanton Drew, Avon. ST 603 630 *6 miles south of Bristol.*

(Plates 7, 18). A great stone circle about 360 feet (110 metres) in diameter is flanked by the remains of two smaller rings. Two ruined avenues led down to the river Chew. In line with the north-east and central rings a Cove stands behind the church near the Druid's Arms.

Stenness, Orkneys. HY 306 125 *4 miles ENE of Stromness.*

(Plate 23). Only four stones survive of this large circle-henge with its rock-cut ditch. Three of them are 15 feet (4.6 metres) or more high. A version of a Cove stands near the middle.

Stonehenge, Wiltshire. SU 123 422 *2 miles west of Amesbury.*

(Plate 24). A simple henge, *c.* 3200 BC, was succeeded by two bluestone rings, *c.* 2200 BC, which in turn were replaced by the well known sarsen circle with its horseshoe of trilithons. Two of the Four Stations rectangle that enclosed the ring survive. The outlying Heel Stone stands alongside the A344. One may now walk across the plain from the east end of the Cursus neolithic earthwork (SU 137434) and along the avenue that led to the henge's north-east entrance. It is not possible to enter the ring but one may walk around it. *Charge.*

Sunhoney, Aberdeenshire. NJ 716 058 *1½ miles east of Echt.*

This fine recumbent stone circle, its stones set in a rubbly bank, has a superbly cupmarked recumbent. Cremated bone was found in the ring in 1865. The recumbent stone circle of Midmar is a mile to the WNW.

Swinside, Cumbria. SD 172 883

2½ miles ENE of Broughton-in-Furness.

(Front cover). Three-quarters of a mile walk. A very attractive, large circle. It has a tall north stone and a south-east entrance of double portal stones. Excavation in 1901 found only charcoal and decayed bone.

Temple Wood, Argyll. NR 827 979 *6½ miles NNW of Lochgilphead.*

This circle stands in the Kilmartin Valley with its standing stones, cairns and decorated cist-slabs. Excavation in 1928-9 and 1974 onwards proved the ring to have been oval. It was later converted into a ring-cairn by the addition of drystone walling. Internal cists contained cremations. A double-spiral was carved on the north stone. A second circle was discovered to the north.

Torhousekie, Wigtownshire. NX 383 565 *3½ miles WNW of Wigtown.*

This variant recumbent stone circle has stones graded in height towards the south-east and a 'recumbent' and its flankers inside the ring. 130 yards (120 metres) to the east is a Three-Stone row.

Tregeseal, Cornwall. SW 387 324 *1¼ miles north-east of St Just.*

This well preserved ring is the eastern survivor of a pair of circles. Originally nineteen tall stones stood on the circumference of a flattened circle about 72 feet (22 metres) in diameter.

Trippet Stones, Cornwall. SX 131 750 *6 miles north-east of Bodmin.*

A pleasing ring once of about 26 stones in a true circle 108 feet (33 metres) across. The Stripple Stones circle-henge can be seen to the east.

Glossary of terms

Archaeo-astronomy: the study of astronomical practices amongst ancient societies. When investigating pre-literate communities like those of prehistoric Britain where there are no written records such research is exceptionally difficult.

Barrow: an artificial mound of earth, chalk or turf used to cover one or more burials.

Beaker people: continental people who first entered Britain around 2600 BC, their name coming from the distinctive and elegant pots that were often buried with the dead under round barrows. They may have been the first metal-users in the British Isles.

Beltane: an 'iron age' festival to celebrate the coming of spring and held on the night before 1st May. Associated with the lighting of fires, it may have originated in the neolithic period.

Bluestones: the name given to the mixture of stones, mainly of dolerite, probably from the Preseli mountains of Dyfed, used in the second phase of Stonehenge.

Boulder-grave: a burial place of large stones, consisting of several low ones embedded in the ground and supporting a heavy capstone. Such monuments are quite often found with recumbent stone circles in south-west Ireland.

Cairn: an artificial mound of stones covering one or more burials.

Chambered tomb: at first a burial-place, later a shrine, of the neolithic period. It consisted of a stone-built passage giving access to one or several chambers. It could be covered by a long or round barrow or cairn.

Circle-henge: a henge whose central plateau supported a stone circle.

Cist: a grave lined with thin slabs of stone and covered by a capstone. Cists were sometimes inserted inside existing stone circles.

Concentric circle: a stone circle with another inside it. Usually the inner ring was of taller stones. Never numerous, such rings were built in south-west Scotland, Ireland and Wessex.

Cove: three standing stones, one at the back, two at the sides like an unroofed sentry-box.

Embanked circle: a stone circle whose pillars were embedded in a bank of stones or earth. They were common in the Peak District, and there were others in Yorkshire and Wales.

Five-Stone ring: a Four-Poster with a fifth stone prostrate in its western quadrant. Such rings were almost exclusive to south-west Ireland.

Four-Poster: four stones standing at the corners of a small and crude rectangle, most commonly found in central Scotland.

Gnomon: a standing stone for astronomical observations. Originally it was a pillar whose shadow indicated the time of day. Sundials have gnomons.

Henge: a circular or oval earthwork of the late neolithic and early bronze age. It had a ditch and bank of earth, chalk or gravel with one or more entrances, and it surrounded an open central space.

Kerbstones: heavy stones, side by side, around the base of a barrow, cairn or chambered tomb.

Lintel: a stone across the top of two uprights like those on the sarsen circle and the trilithons at Stonehenge.

Megalithic: made of very large stones.

Monolith: a single standing stone.

Passage-grave: a round chambered tomb with a passage leading to a burial chamber, common in Ireland and Scotland.

Recumbent stone circle: a circle whose stones rose in height towards the south-west where a heavy block lay between the two tallest pillars. Most numerous in north-east Scotland, there were variant forms in south-west Ireland.

Ring-cairn: a low round cairn without a passage but with an open central space in which cremated bones were often placed. Ring-cairns are often found inside the stone circles of the Clava and recumbent stone circle complexes.

Wessex: the area of southern England including all or parts of Wiltshire, Dorset, Berkshire, Somerset and Hampshire, which supported a large prehistoric population on the easily worked chalk soils.

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Prehistoric Stone Circles

Stone circles have excited the imagination of their visitors ever since the time of John Aubrey, the seventeenth-century antiquarian who was the first person to study them seriously. For three hundred years archaeologists, astronomers and anthropologists have argued about the purpose of these abandoned rings. In recent years the accurate surveys made of many sites have revealed that these were not roughly laid-out rings. To the contrary, the monuments were elegantly designed by people who took great care over the planning of these ritual centres. Modern excavations have shown that the earliest circles were erected over five thousand years ago and that often sightlines were built into them towards the sun or moon. Whether in northern Scotland, western Ireland, Wales or southern England, a picture appears of widely dispersed communities constructing great rings for their ceremonies, frequently burying burnt human bone inside them. *Prehistoric Stone Circles* describes these rings, including Stonehenge, explains their history and the facts known about them, and shows how we are gradually coming to an understanding of the significance these gaunt, grey circles had to their builders.

About the author

Aubrey Burl, born in London, was educated at the universities of London and Leicester, where he read archaeology. His interest has always been in the early societies of prehistoric Britain, particularly in their ritual practices, and his *Stone Circles of the British Isles* (Yale University Press, 1976) is recognised as the standard work on the subject. Fieldwork has taken him to all parts of Britain and Brittany to study and make surveys of megalithic tombs and rings and rows of standing stones. He has also directed the excavation of several monuments including two of the strange recumbent stone circles of Aberdeenshire. Archaeology, he believes, is not just about their broken possessions but about the people themselves and it is the recovery of the forgotten beliefs and values of our ancestors that most concerns him. Formerly Principal Lecturer in Prehistory at Hull College of Higher Education, he now lives in Birmingham.

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